

FLORIDA HIGHWAYS

Vol. IV

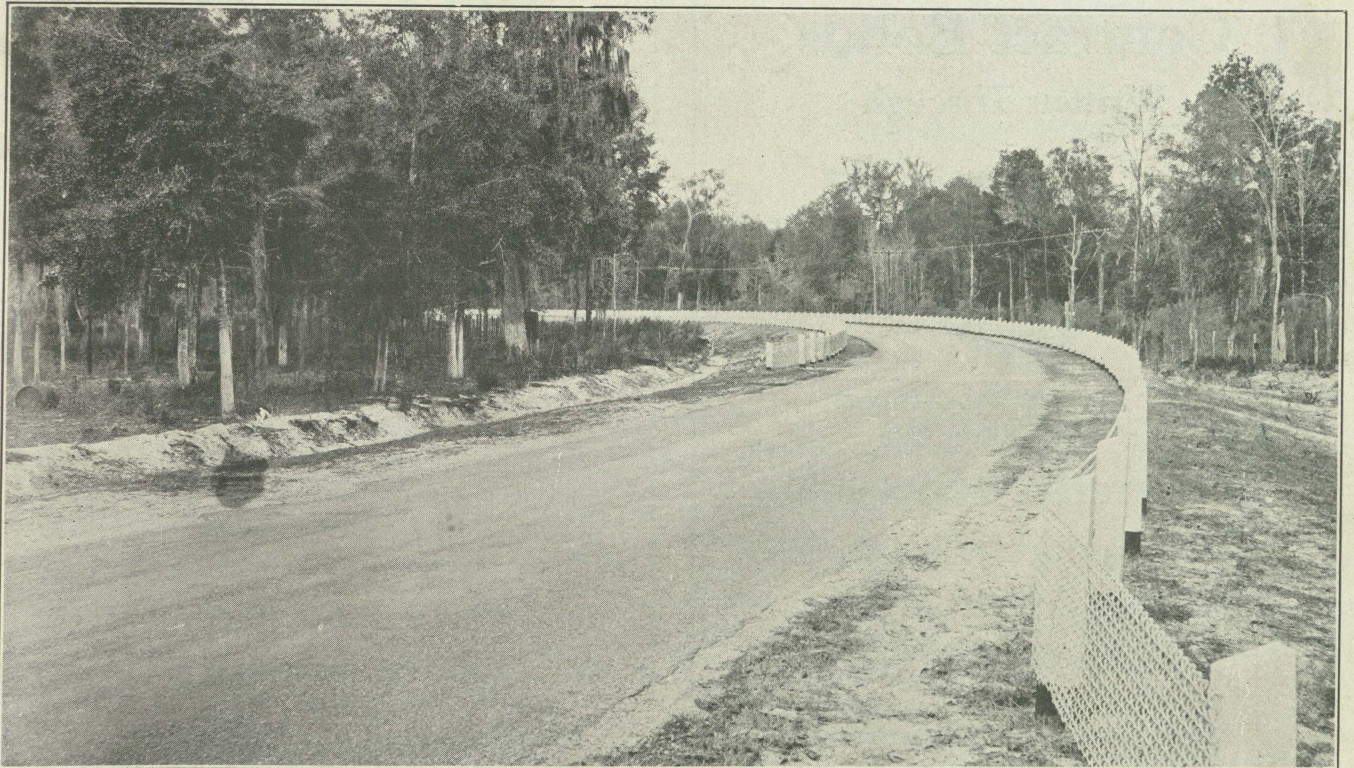
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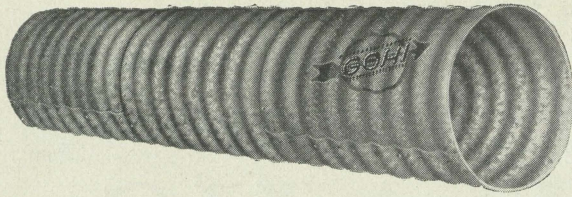
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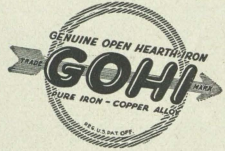


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Vol. IV

DECEMBER, 1927

No. 12

State and Federal Court Decisions Affecting Highways

By Hugh Stephens, Vice Chairman, Missouri Highway Commission

THE courts have had it in their power to greatly help or hinder the American road building program. The highway is an institution which comes very close to the individual citizen. Its location and construction may sometimes alter the social and business adjustments of communities. Property rights are involved. New traffic problems are created. A work of such character and magnitude must bring up many points for legal interpretation. The success or the breakdown of the movement may be determined by the attitude of the judicial mind.

Highway a Utility

The modern highway has practically become a public utility, a revenue producer, one which pays its way and more. Apparently public ownership and operation of the highways is succeeding, whereas we have persuaded ourselves that public ownership of other utilities could meet with nothing short of failure. A test of the efficiency of democracy is taking place.

Such a work could not prosper without the sympathetic cooperation of all branches of government, the judicial as well as the legislative and executive.

Courts Have Helped

The courts, both federal and state, have done their part to facilitate the undertaking by interpreting according to the spirit rather than the letter of the law. Their decisions in the main have been liberal and helpful. To the people should also be given credit for not cluttering dockets with a great num-

ber of technical and contentious lawsuits and other proceedings.

Decisions Support Commissions

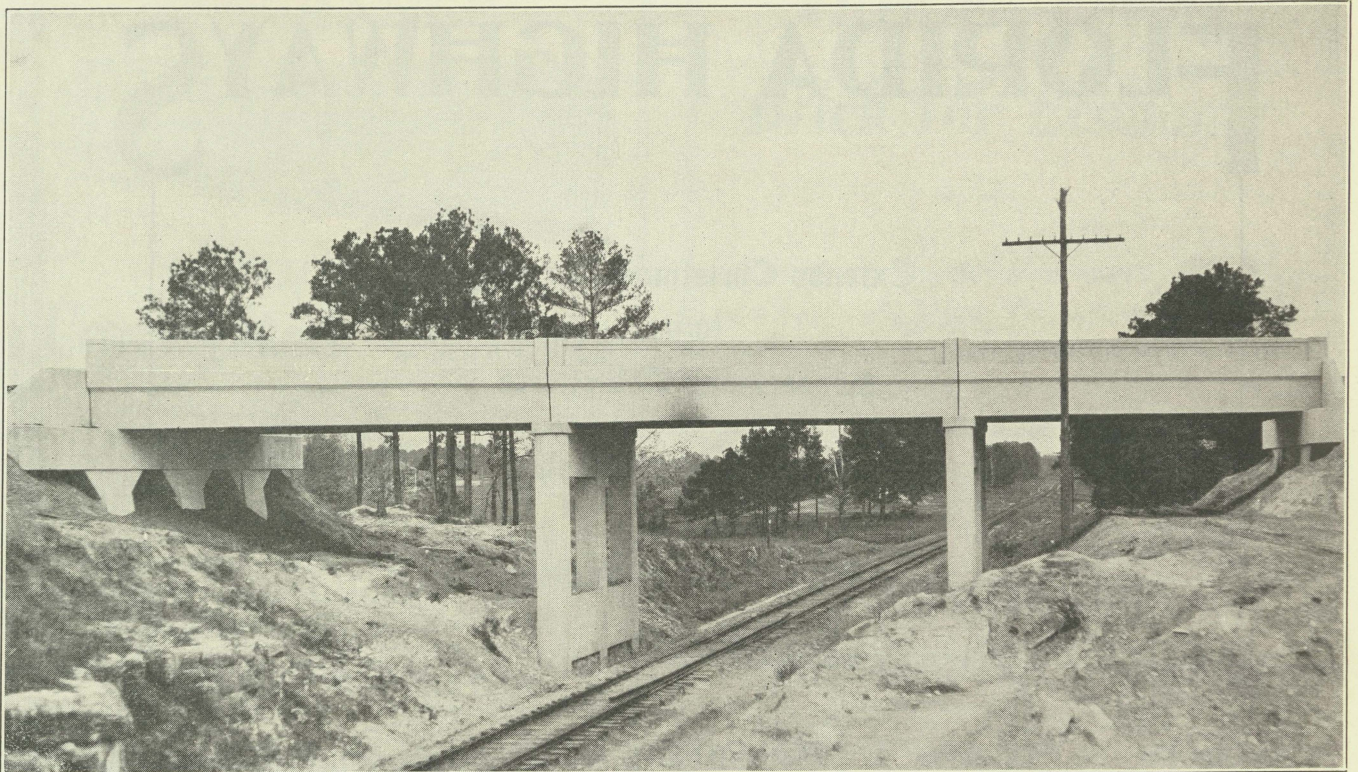
The courts reveal an understanding of the importance of the highway in modern life. No breakdown of the movement is indicated by their decisions. In most of their declarations they voice the necessity of giving highway commissions the greatest possible authority. A few recent utterances will, I think, justify this conclusion.

"Road building is not a matter of drawing a line upon a map" (speaking of a legislative map adopted), says Mr. Justice Stacy of North Carolina in the Cameron case. "It partakes of scientific, rather than legislative or judicial engineering."

Caution Regarding Interference

The lower courts are admonished by the appellate courts to use caution when called upon to interfere with state highway commissions. In the McGruder case (94 Atl. 153), the Court of Appeals of Maryland declared that "Those engaged in that character of work are better qualified to determine the location of roads and the material of which they are to be built than the courts are, and when the members of the commissions have settled the difficult problems they often have before them, the courts should be very cautious when they are asked to interfere with them."

While in some states the courts place the emphasis upon the legality, the weight of authority is that



Standard Overhead Crossing

the emphasis should be upon the idea. Again in the McGruder case the court said, "It must be remembered that the legislation was for the road system of the whole State, and not simply for the roads of Prince Georges County."

Scope of Decisions

In order to keep this paper within the briefest space possible, discussions must be condensed and only the main points treated. No exhaustive digest of the field of cases is attempted, nor is reference made to highway statutes except those which have been the subject of cases in court. Decisions are considered principally with regard to "Location of Roads" and "Traffic Control." Contractual obligations, specifications and competition, condemnation and rights of way, I realize, are important, but decisions particularly applicable to highways are difficult to classify.

Location of Highways

The laws of the various States are so differently worded that we can not lay down many general principles which the courts have established by their decisions regarding location or relocation. It is rather generally decided that where the commission is vested with the power to determine such questions the courts cannot and will not interfere with the exercise of discretion in the absence of fraud or palpable abuse of power. Of course, where the statute locates a road by description or clear implication the commission has no power to deviate from such legislative location. All seem to agree that points designated in the law must be met, but between such designated points the detailed location is vested entirely with the commissions.

Six State Decisions Quoted

Maryland

The laws of Maryland give the highway commission the right to select all State roads at its discretion. It is also given power to "make such changes as it may deem desirable in the projected location of any road," and to take over existing highways and relocate or alter location of same. In the case of *Huffman v. Commission* (Md., 1927, 137 Atl. 358), the Court said that the commission had the right to relocate a bridge over the Susquehanna River on account of the relocation of the highway some distance from the old location. The Court declared that the commission had power to relocate not only the roads which it proposed to incorporate in the State system but also old roads which had been for years a part of the system "when and as changed conditions made such relocations desirable for the efficiency of the highest utility of the entire system."

Illinois

The Illinois bond issue act designated a State highway running in a general southwesterly direction from Chicago to East St. Louis. The highway traversed the city of Pontiac on a certain street; a relocation was proposed on another street thirteen blocks west. The Illinois law provides "that the department of public works and buildings shall have the right to make such minor changes in said routes as may become necessary in order to carry out the provision of this act." The new location was shorter and eliminated two grade crossings and inconvenient right angle turns in the business part of the city but was more expensive. The Court held that the original designation through the business section was not final, that the relocation was a substantial

compliance with the law. (*McGregor v. Miller*, 1926, 154 N. E. 707.)

Changes in Routes

In the case of *Stratton v. Henkel Construction Company* (Ill., 1926, 151 N. E. 546), two towns, Waterman and Leland, were located on Route 23 by the department of public works and buildings but not designated in the law. In the next year the location was changed to run one mile west of Waterman and two and one-half miles east of Leland. While the new location abandoned several miles of paving previously built with State aid the new route was shorter and more economical and safer. The Court held that the first location was not final and approved the change. In its opinion the Court held that between towns named in the act the highway authorities have full power to determine the location.

In *People v. Department* (1926, 150 N. E. 655), the Supreme Court of Illinois approved a change of four blocks in a highway to avoid grade crossings.

Missouri

One of the important location suits of recent years was *Castilo v. Commission* (279 S. W. 673), decided by the Missouri Supreme Court in 1925. An act was passed establishing a State highway system describing in detail the location of each road from one terminus to another. The system traversed the various counties with one east and west and one north and south road in each county. A proviso inserted in the law gave the commission the right to designate approximately 1,500 miles of primary high type roads "connecting the principal population centers of the State and to make such changes in the routes of said roads as may be deemed necessary in the interest of economy and directness of routes." The Missouri commission laid out what is known as an "airline" from St. Louis to Kansas City missing by one to twelve miles most of the towns on the established route. The Court held that the commission was acting within the power vested in it under the statute governing the 1,500 miles of primary roads. While the commission in the location of secondary routes has adopted the practice of skirting towns none of the secondary routes have missed the towns designated.

Kentucky

In the case of *Moore v. Polsgrove* (1927, 293 S. W. 965), the Supreme Court of Kentucky decided that where a road had been designated through "Honeysuckle" and the law was amended, substituting "Bryant's School House," but referring in another place to Honeysuckle "and" Bryant's School House, the same should be construed Honeysuckle "or" Bryant's School House. This allowed the commission two alternate routes for a primary road.

North Carolina

Instead of designating the roads of North Carolina by description a map was attached to the law creating the State highway system. The law provides that the roads may be changed or added to or discontinued by the State Highway Commission, but "no road shall be changed, altered, or discontinued, so far as to disconnect county seats, principal towns,

State or national parks or forest reserves, principal State institutions and highway systems of other towns."

The Court supported the commission in the claim that the statute did not bind the commission to a location originally selected. *Road Commission v. Highway Commission* (1923, 115 S. E. 886). The route proposed to be selected by the Commission had to be posted in the particular county and if no objections were made such posted route became a State highway. In the case of *Cameron v. Commission* (1924, 123 S. E. 465), the Court declared that the routes shown on the map were tentative and not final and upheld the commission in changing a route so as not to pass through Stem but to pass through the town of Creedmoor, although for a long time the commission had temporarily maintained the route through Stem and although Stem was shown on the route upon the legislative map. A more strict construction, however, is given the act in the next two cases decided by the Supreme Court of North Carolina. In *Newton v. Commission* (1926, 133 S. E. 522), a location was changed from the principal street by the court house to another location one and one-eighth miles from the court house but within the corporate limits of the town. This the Court refused to approve because it meant, in the opinion of the Court, "disconnecting" the county seat of Newton. In other words, "Running around a county seat" is different from "running to a county seat." The strict principle announced in the Newton case was reaffirmed upon motion for rehearing.

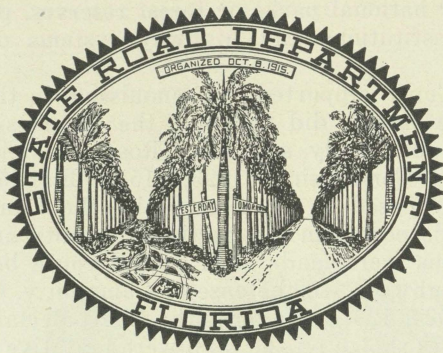
In its latest decision the Supreme Court of North Carolina has indicated a desire to abandon this rule of strict construction applied in the Newton and Cameron cases. In *Johnson v. Board* (1926, 135 S. E. 618), the Court approved a change of location through Varina, a very small and unincorporated town shown on the legislative map, to a new location within three hundred feet of the railroad station in said town. Such change was declared to be in compliance with the legislative map.

Louisiana

In *de Clairborne et al. v. Louisiana Highway Commission* (1923, 154 Louisiana 743), the Louisiana Supreme Court held that the State highway law vested in the Louisiana Highway Commission the power, discretion and duty of selecting "the most specific and detailed locations" for the routes named in the statute "in such manner as shall be prescribed by law, but in fixing such definite and detailed routes the said highways shall touch the various towns, cities and villages named therein." The routes embraced in the State highway system were designated by the Legislature by naming certain places through which they should pass. The court further held that it was within the discretion of the commission to decide on the location and construction of bridges.

Tennessee

The Supreme Court of Tennessee, speaking through Chief Justice Lansden, in *Sumner County v. Interurban Company* (1919, 213 S. W. 412, 5 A. L. R. 765), says: "Public roads, like everything else, are developing in their nature and character and in the uses to which the public subjects them. As civilization develops and the inventive genius of man pro-



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Volume IV December, 1927 Number 12

gresses, new uses of public highways may be found. The remedy in such event is not to restrict the public in its enjoyment of its public highways, but to improve and enlarge the highways. Their sole use is to accommodate the public and enable its members to communicate with each other both socially and in business ways."

Dividing Cost of Bridges

A case of some importance affecting interstate bridges has been decided in Texas. This is Highway Commission of Texas et al. v. Vaughn (1926, 288 S. W. 875).

The State Highway Commission was enjoined in the lower court from expending State funds on a bridge between Wichita County, Texas, and Oklahoma, except on that part of the bridge within the State. The northern border of Texas is the south cut bank of the Red River, which would place only the south approach and about 310 feet of the bridge proper within the State of Texas. The higher court dissolved the injunction and dismissed the proceedings with the following statement: "While the south cut bank does legally and technically form the boundary with reference to Texas civil and criminal jurisdiction and ownership of territory; still with reference to preventing social and commercial intercourse with her sister State, a primary reason for her entering the Union, the river forms the barrier separating them. A bridge on either bank of the river will not remove the barrier. The structure required must necessarily rest on each high bank of the river, span the entire territory between them, including the river, with ends opening into each of the States, and when this is done there is of course but one structure with reference to its use." The Supreme Court of Pennsylvania, in the case of Keiser v. Union Co. (26 Atl. 1066), was quoted with approval that "No matter whether the boundary is the middle or the edge of the stream, the bridge must connect both banks; and the moment it does so, even if only with an abutment, there is no longer any one county in which it is located."

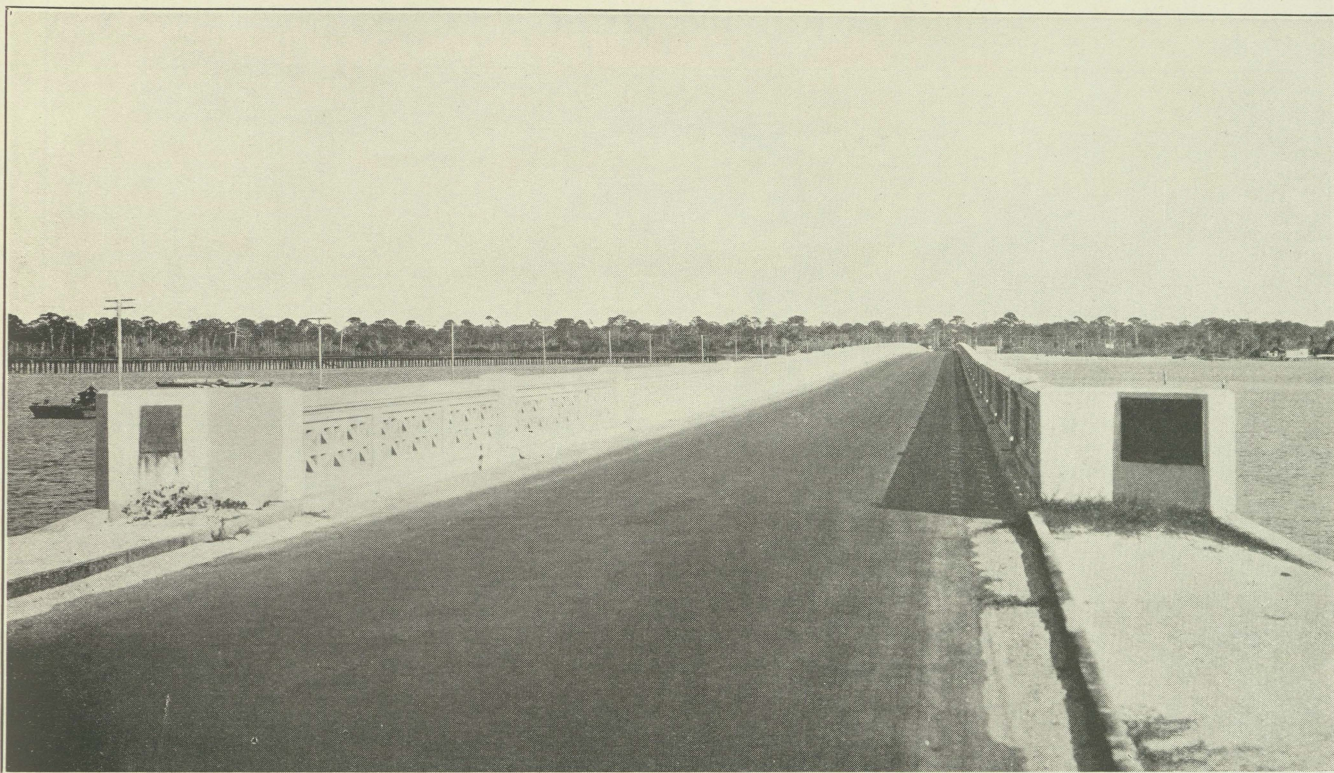
Missouri is probably the only State which provides for what are known as "refund" roads. Where certain highways previously built with local funds are taken into the State system the counties are refunded in additional roads. The State Supreme Court has decided in the case of State ex rel. v. Commission (1926, 286 S. W. 1), that the local subdivisions and not the highway commission have the right to locate such roads.

Traffic

Highways have brought with them a police problem. The rapid increase of vehicular traffic has placed a new burden upon nation, State, and municipality. We have not yet developed a system of laws governing the operation of motor cars within and between the various States which is either comprehensive or uniform. The courts have therefore been called upon to decide many cases of jurisdiction.

Powers of Commissions

No case has been found where an appellate court has decided what are the visitorial powers of a State highway commission, but authorities indicate that said commissions may in proper cases proscribe and prevent encroachments and obstructions, the use of inju-



Seminole Bridge in Pinellas County

rious vehicles and the doing of detrimental acts on the highways under their control and supervision.

Several decisions have been rendered giving to commissioners of highways and streets in towns power to prevent injury to the highway; thus in *Commissioners of Highways v. Drainage Commission*, 162 Ill. App. 158, it is said: "It is not necessary before action be brought by them for the purpose of preventing irreparable injury to or to permit obstruction of the highways that they should secure authority to do so from the town at the annual meeting."

In Vol. II, Elliott on "Roads and Streets" (4th Ed.), Sec. 828, the author says:

"Public highways belong, from side to side and end to end, to the public * * *. The public are entitled not only to a free passage along the highway, but to a free passage along any part of it not in actual use by some other traveler, and if this be true it necessarily follows that there can be no rightful use of the way for private purposes. The rule would seem, upon principle, at least, to extend to country roads as well as to streets * * *."

In *Commissioners of Highways v. Drainage Commissioners* (162 Ill. App. 158), it is stated that "Commissioners of Highways (of a town) are authorized to sue and be sued * * * and when necessary it becomes their duty to properly protect the highways by resorting to legal proceedings."

Attitude of Courts

It seems apparent, therefore, that State highway commissions need not fear the attempt to exercise proper control over such matters when the time arrives. Even without explicit statutes applying to State roads one can read between the lines the probable attitude of the courts.

Municipal Traffic

The right to regulate vehicles upon the streets of

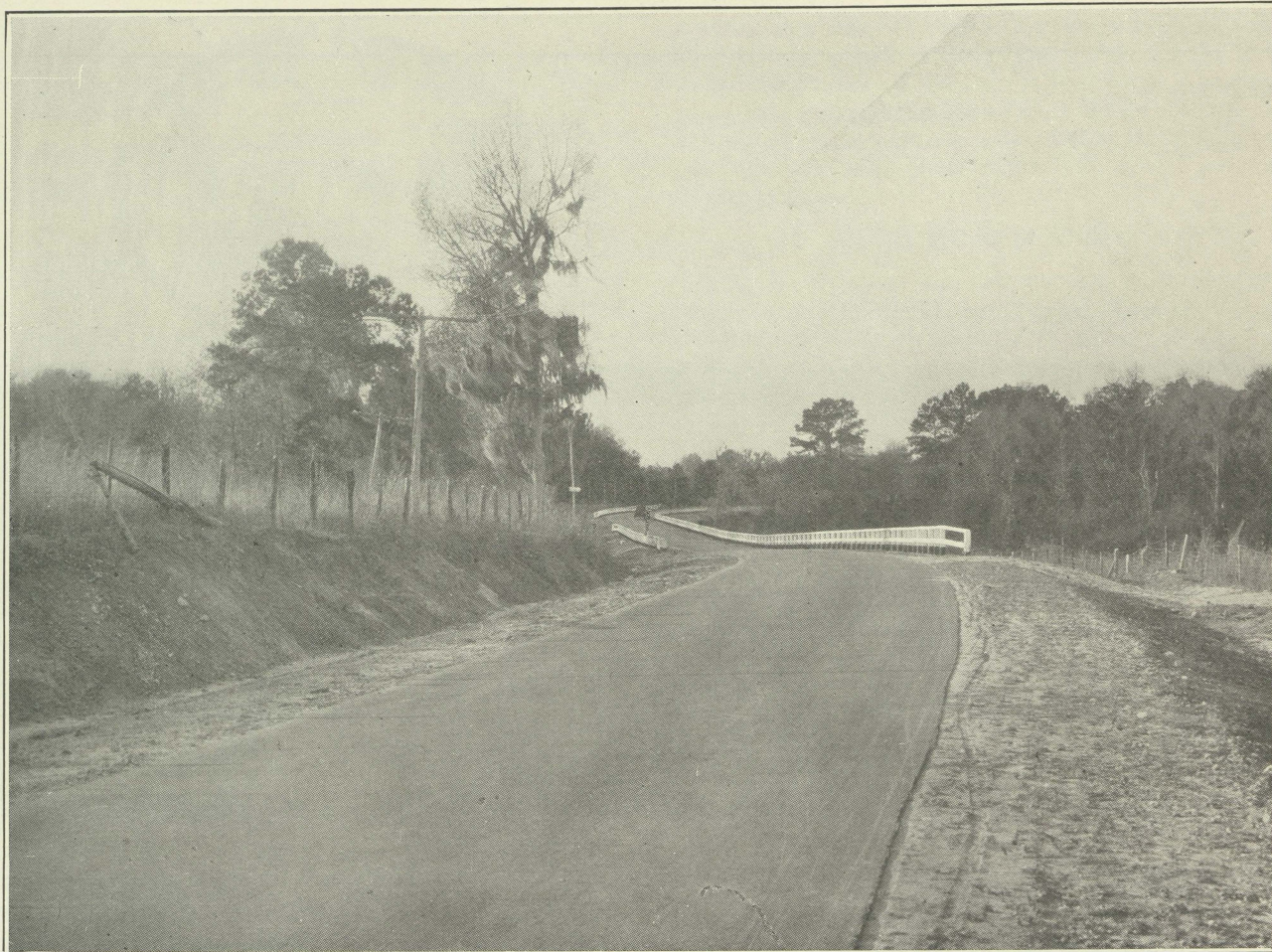
cities, towns and villages, has always been vested in the municipal authorities by the expressed or implied provisions of charters granted by the State. The creation of public utility commissions first made necessary the surrender of a degree of regulation as far as it applied to electric, gas, street railway, and water systems. This has paved the way for a modification of the police powers in order to share with the State the regulation of traffic and obstacles upon streets which have become parts of the State highway systems.

Some conflict between statutes and city ordinances is reflected in decisions already handed down. Little effort has been made, however, on the part of the Federal Government to enact laws or participate in control of highway traffic between States. Most of the activity of the Federal Government has been confined to co-operation with the State highway departments in fixing engineering standards for the construction and maintenance of highways.

The time is near when in the interest of safety and uniformity of traffic control the States may be compelled to extend the exercise of their police powers and enact laws which will adequately deal with this problem. Its ultimate solution must rest mainly with the State working in harmony with the police authorities of the local municipalities and not in conflict with the interstate commerce laws.

Origin of Control

An early English court about one hundred years ago, defined a rule that "The King's highway cannot be used as a stable yard." The control of traffic and obstacles upon the public highways finds its basis to some extent in that declaration. In the language of today the public road must not be used as a "garage" or a "filling station." The parking of cars and the erection of structures on the highway in and near cen-



Road 2. Project 37-C. Alachua County.

ters of population constitutes an offense to the eye and a menace to safety which can only be dealt with by centralized control.

The Appellate Division of the Fourth Department of the State of New York in 1923 declared that a taxpayer might maintain an action of mandamus to compel the abatement of a filling station in a street of Buffalo, although said filling station was erected under a license granted in accordance with a city ordinance. *Kahabka v. Schwab* (205 App. Div. 368, 142 N. E. 298).

But a conflicting opinion was rendered in the same State concerning a filling station in Peekskill (*McCoy v. Jordan*), based upon the fact that the road was constructed with Federal aid and was "used in interstate traffic and for carrying the mails." With this decision some attorneys disagree, holding that the Federal Government should do no more than withhold Federal aid to the State upon the ground that Federal aid roads were not being maintained by the State in accordance with the acts of Congress.

Federal Aid in Crossings

The Supreme Court of Missouri has rendered a decision upon the status of Federal aid funds in connection with a recent railroad grade separation. In *State ex rel. v. Public Service Commission* (1926, 287 S. W. 617), the Public Service Commission of Missouri had apportioned the cost of a grade separation between the Highway Commission and a railroad company. The Court held that in substance Federal aid funds are gratuities. The allotment to the State of Missouri was regarded as State money, and in determining the apportionment of the cost of a grade separation on a State highway which is a Federal aid project, the Public Service Commission should treat all Federal

aid applicable as a portion of the State's one-half of the cost and not deduct Federal aid from the cost before division of cost is made between the State and the railroad company.

In *State ex rel. v. Public Service Commission* (1927, not yet reported), the Supreme Court of Missouri upheld the validity of an act of the 1925 Legislature providing that in assessing the cost of grade separations on the State highways not more than 50 per cent should be assessed by the Public Service Commission against the State.

There seems to be only one case which decides that a city is not liable for personal injuries due to defect in a street which is a part of the State highway. This is *Gardner v. City* (Indiana, 1927, 156 N. E. 830).

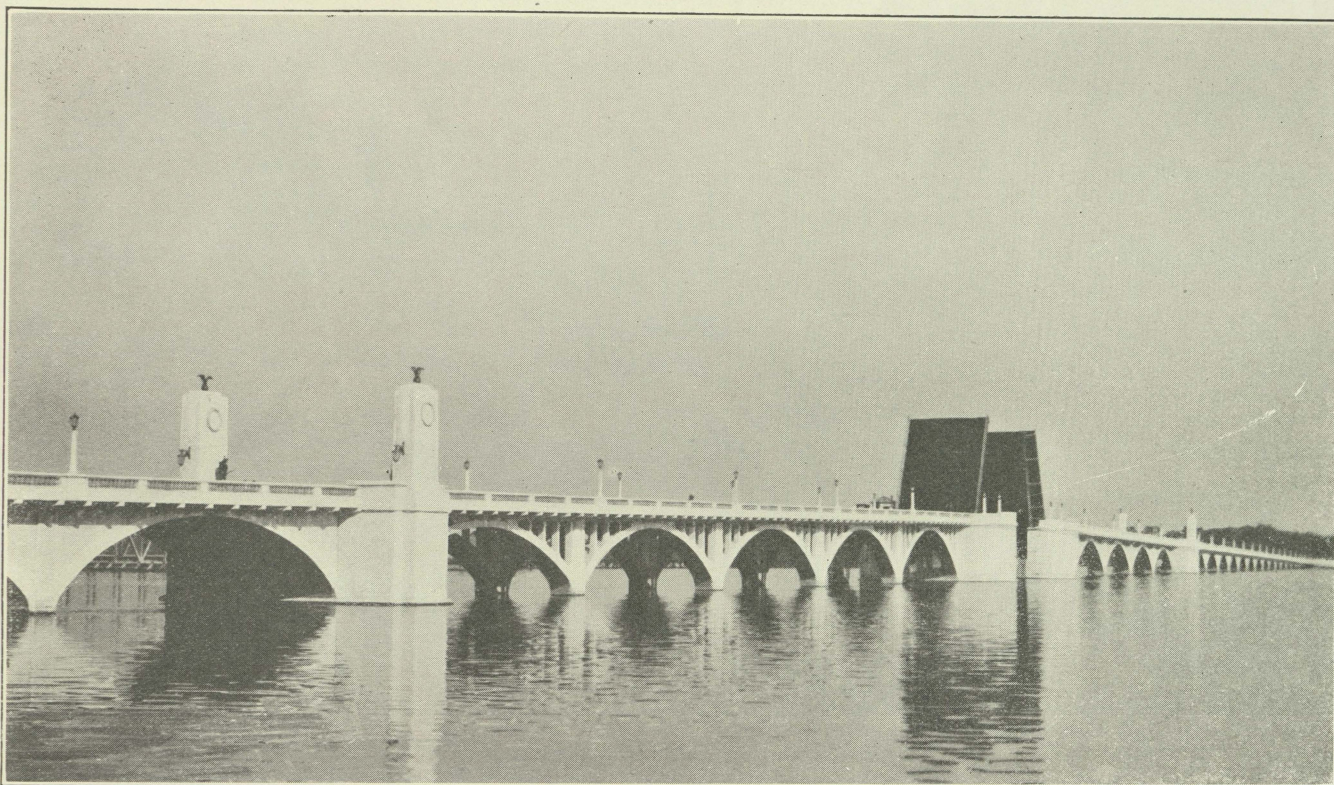
The law regarding the rights of electric lines on highways has been fairly well settled. In *re Electrical Interference* (P. U. R., 1917, B, 800), it is said that where a telephone or telegraph line is located on the highway the first line is superior to and has priority over later lines and the later lines must bear the cost of eliminating interference. However, any electric power line which facilitates ordinary travel is superior to any line which does not, whether the travel power line comes on before or after other lines.

A public service commission may not compel a power line to move where the expense of new right of way would be prohibitive. Instead the telephone or telegraph line must take care of the interference when it can do so at comparatively small expense.

The Federal Court has thrown the weight of its decisions in this direction. *Cumberland Telephone & Telegraph Co. v. United Electric Railway Co.* (42 Fed. 273). Also in a Canadian case, *Bell Telephone Co. v.*

(Turn to page 14)

Putnam County Memorial Bridge



The above is a splendid view of the Putnam County Memorial Bridge across the St. John's River at Palatka, which was dedicated and opened to traffic with elaborate ceremonies on November 11th, Armistice Day.

Although the bridge was financed and constructed wholly by Putnam county, it is crossed by State Roads 3, 14 and 28, and hence forms a most important link in our State highway system.

The bridge is twenty-five hundred feet in length, with a seventeen hundred and fifty-foot causeway at the east end. The width of roadway is thirty feet, with one five-foot sidewalk. It was built by Stein Construction Company as contractor, with Daniel B. Luten as engineer.

At the ceremonies attending the dedication and opening, Dr. F. A. Hathaway, chairman of the State Road Department, by invitation, delivered the principal address.

U. S. Aided Improvement of 8,300 Miles of Roads

FEDERAL-AID road projects completed during the fiscal year ending June 30, 1927, increased by more than 8,300 miles the mileage of improved roads in the Federal-aid highway system, and brought the total length of roads improved with Federal assistance up to 64,209 miles, the Chief of the Bureau of Public Roads, Thos. H. MacDonald, says in his annual report to Secretary of Agriculture Jardine, made public in Washington recently. The Bureau of Public Roads also co-operated with the State highway departments in secondary improvements necessitated by increased traffic on 1,376 miles. Independently for the most part, it completed construction of 453 miles of main highways in the National Forests; and at the request of the National Park Service the bureau surveyed and supervised the construction of important roads in the national parks and monuments, among them a number which will give access to hitherto unapproachable beauty spots of the national domain.

Federal payments during the year amounted to \$81,371,013.03, or about \$6,000,000 less than the disbursement of the previous year which in turn was \$8,000,000 lower than the year before. "It may be expected," Mr. MacDonald comments, "that the an-

nual expenditure will be still further reduced in the future until—the accumulated balances of earlier appropriations being expended—the program of expenditure reaches the rate set by the annual authorization of \$75,000,000 of recent years.

"The annual highway bill of the country," the report continues, "is in excess of a billion dollars, including all expenditures of the Federal, State and county and other local governments, for construction, maintenance and administration. Of this amount the Federal expenditure is less than 8 per cent, and the States alone spent, of their own funds, more than six times the amount they received from the Federal Government. It is apparent, therefore, that the Federal expenditure, at the current rate, is not extravagant, but is, in fact, extremely moderate in view of the large and growing interstate traffic.

"The largest disbursements during the year were made to Missouri, New York and Texas. To each of these States the Federal Government paid more than \$4,000,000. Pennsylvania received more than \$3,000,000 and all other States less than that sum.

"In proportion to the total mileage of the several geographic divisions, the Federal-aid disbursement in



Road 5. Project 545. Hernando County

1927 was greatest in the Middle Atlantic States and least in the West South Central States. On this basis the first of these groups received more than twice as much as the second, and between these two extremes the other areas, ranked in descending order, were as follows: New England, South Atlantic, Pacific, East North Central, East South Central, West North Central, and Mountain.

"That the offer of Federal aid has not induced the States to make expenditures in excess of those they would otherwise have made is indicated by the fact that in 1926 every State, with two exceptions only (Montana and North Dakota), made expenditures, some very large, in addition to those for Federal-aid roads, the total of such additional expenditures being \$452,798,000, or more than four times the amount spent to match Federal aid."

Co-operating with the States, the bureau completed the selection of the principal transcontinental roads which will form the United States highway system, and on which uniform signs and markers are to be erected by the States. It also practically completed the distribution to State highway departments of the surplus war material, and retains only a comparatively small quantity of explosives which will be distributed this year.

"Equaling, if not transcending, in value the service directly rendered in the construction of roads," Mr. MacDonald believes that "the researches of the bureau have made available to engineers more exact knowledge of the fundamentals of highway design and economics. Of special importance are the studies of the magnitude and effects of the impact of heavy motor trucks upon highway surfaces, and the possibility of

reducing the intensity of the impact forces by changes in the spring, wheel and tire equipment, and by refinement in the surfaces of roads." Other important studies dealt with soils and road surfaces, transport and traffic surveys, efficiency studies in the operations of road building, and the testing of materials and designs.

The Federal-aid highway system now includes more than 185,000 miles of road, about one-third of which has been improved with Federal assistance. With the exception of about 7,500 miles, all the 64,000 miles have been improved in the last six years. "The number of motor vehicles," Mr. MacDonald observes, "continues to increase annually at an approximately constant rate. The registration of 1926 was more than twice that of 1921, the year in which the Federal-aid system was designated, and the traffic served by the roads has, of course, increased proportionately. It is necessary, therefore, not only to extend the improved mileage, but also gradually to raise the type of improvement on the roads already constructed."

The aggregate length of the bridges more than 20 feet long built during the year was 45.9 miles, which was more than twice the bridge mileage of the preceding year. A bridge, more than two miles in length, spans the Choctawhatchee River in Florida, between Westville and Caryville. Two, each more than a mile in length, were completed, one over the White River between Bedford and Mitchell, in Indiana, and the other over the Platte River, in Nebraska.

The report includes brief summaries of the Federal-aid road work in each of the 48 States, and short descriptions of the more important researches in progress.

FLORIDA HIGHWAYS

From the Florida Engineer and Contractor.

A trip from Jacksonville to St. Petersburg, from Jacksonville to Miami or from Jacksonville to Pensacola convinces one that Florida is rapidly becoming the State of incomparable, complete systems of highways. Regardless of how one chooses to ride between Jacksonville and Tampa scenic lands greet one. It is such a change from a few short years ago, when even then we boasted of our hard-surfaced roads. It is not long ago when one chose to boost and praise the narrow ribbon of brick highway through St. Johns county from north to south—one of the first pieces of county-built highways in Florida. But today, the wide stretch of concrete replaces the narrow ribbon of a few years ago and such a joy one experiences in now riding from Jacksonville to St. Augustine. And so it is to every part. In years past to reach Tampa one was obliged to travel via St. Augustine, Daytona, Deland, Orlando, Lakeland, etc., but not so today. Now one travels the "short cut" from Jacksonville to Tampa, Baldwin, Gainesville, Ocala, Dunnellon, Brooksville, etc. And the road to Pensacola! Only a few miles of this scenic highway remains to be built, a part skirting Escambia Bay near Pensacola.

Florida today has more and better roads than North Carolina, the State every other one aimed at just a few years ago. And the Florida program is just in its infancy, if we can judge from the comments made recently at Palatka by Fons Hathaway, chairman of the State Road Department. To date work has been done only on first preferential roads.

And this month there was launched at Jacksonville the first of three ferry boats to connect the termini of the Monroe county road into Key West. When these ferries go into commission it will be possible to drive from Calais, Maine, in the northeast over a hard-surfaced road the entire distance into Key West. Such is the Atlantic Coastal Highway.

And while we all enjoy and enthuse over our roads, while we cheer our State Road Department and Government agents, do not let us forget those fellows whose work designed and supervised the construction of all these splendid highways—the engineer is lost sight of and only the man higher up gets the glory, so let us as engineers give praise to whom praise is due and simultaneously credit the State Road Department for the efficient direction it has given.—G. W. S.

Only Twelve States

There seems to be a general impression that the States are securing all of the funds received from motor license fees and gasoline tax to be applied in the construction and maintenance of State highways.

However, this is far from the truth, as in very many cases the legislatures have seen fit to divide these funds between the State, counties, cities and even townships. The following are the only States that in 1926 devoted all of the funds from these sources toward the improvement of the State road systems: Connecticut, Delaware, Illinois, Massachusetts, Minnesota, Missouri, New Hampshire, North Carolina, Rhode Island, Utah, Vermont and Wyoming.

STATUS OF FEDERAL SEVEN PER CENT SYSTEM IN FLORIDA

THROUGH the courtesy of Mr. F. W. Berry, Office Engineer, we are enabled to present herewith a brief statement of the present status as to construction and completion of the several Florida highways which are included in the Federal system:

State Road No. 1—Is paved with standard paving, Jacksonville to Tallahassee except six miles. Tallahassee to River Junction is standard grade with gravel surface. River Junction to Milton is standard grade and is surface treated with slag and asphalt except between Ponce de Leon and Argyle and from Mossyhead to Crestview. From Milton to Pensacola county clay road; between Escambia Bay and Pensacola the State is constructing a standard road. Pensacola to Alabama line, paved according to State standards.

State Road No. 2—Is paved with standard paving from the Georgia line to Silver Lake Forks, in Lake county. From this point to Mt. Dora both branches of No. 2 are under construction. Paved State standards, Mt. Dora to Plymouth. From Plymouth through Orlando to Zolfo Springs there is a county paved road. State plans a new road over this last named stretch. Zolfo Springs through Arcadia to Camp Carlstrom, standard pavement. From Carlstrom to Lee county line, standard grade with marl surface. From this last point to Ft. Myers is county paved road. No. 2 south of Leesburg, paved with standard paving to Groveland and from this point to Lake county line under construction by the State.

State Road No. 3—Standard paving, Georgia line to Duval county. County pavement across Duval county. Duval county line to Green Cove Springs under construction by State, county road paved. Green Cove Springs through Palatka to Sanford, standard pavement except four miles north of Palatka. Sanford to Orlando, county pavement which is to be replaced by new road which is under construction from Sanford to Maitland.

State Road No. 4—There is a paved road from the Georgia line to Miami, all State standards except through Duval county, Korona to Port Orange, Stuart to Jupiter, West Palm Beach to Dade county line, which is county pavement. From Stuart to Jupiter the State has under construction a new road; the same is true from Delray to the Dania canal.

State Road No. 5—Is paved from High Springs to Fort Myers with State standard construction except in three places. Across Levy county is county pavement, as also across Hillsborough. There is one stretch in Hillsborough from Six-Mile Creek to Riverview, which has been paved by the State. The State is building a standard highway from Venice to the Myakka River, which will replace the present road through Englewood.

State Road No. 6—North of Marianna, has been built by the State as a standard surface-treated sand clay highway.

State Road No. 7—Pensacola to Alabama, is paved in its entirety with concrete in accordance with State standards.

State Road No. 8—Is paved from Haines City to Ft. Pierce. From Haines City to Frostproof and from Avon Park to Lake Stearns is county pavement; the balance of the road is in accordance with State standards to within eight miles of Ft. Pierce, where there remains a county-built pavement.



Suwannee River Bridge

State Road No. 9—Madison to Georgia line, built by the State, standard surface-treated lime rock base.

State Road No. 10—Tallahassee to Georgia line, is a standard sand clay road.

State Road No. 13—Baldwin to Gainesville, is paved all the way. In Alachua county is county pavement, the remainder being up to State standards.

State Road No. 14—Gainesville to Palatka, under construction by the State. Palatka to Road No. 4 not located.

State Road No. 16—Ocala to Road 5. There is at present a county-built pavement. The State proposes to make a new location and build a new road.

State Road No. 17—Haines City to Tampa, is paved all the way, but is county pavement except from Lakeland to Hillsboro county line, which has recently been built by the State. All county-built road to be replaced with standard pavement.

State Road No. 19—Under construction Tallahassee to Perry, pavement by county, Perry to Steinhatchee River. Steinhatchee River to Cross City standard pavement by State. Cross City to Suwannee River under construction by State. Suwannee River to Marion county paved by State. Levy county line to Ocala under construction, State supervision.

State Road No. 21—Daytona to DeLand, county-built pavement.

State Road No. 24—Kissimmee to Brevard county line, county pavement, State to rebuild in 1928. From Osceola county line to Melbourne paved by State.

State Road No. 27 (Tamiami Trail)—Paved county road from Ft. Myers to Bonita Springs. Bonita Springs to Naples, rock county road, State planning to rebuild. Naples to Miami about 50 per cent complete in accordance with State standards, balance under construction by State.

VEHICULAR TUNNEL OPENED IN NEW YORK

The opening of a \$48,000,000 vehicular tunnel, 9,250 feet long and running 72 feet below the bed of the

Hudson River, between New York and Jersey City, marks another great stride in acceleration of the tremendous traffic of the metropolis.

After seven years spent in construction, the formal opening of the tunnel November 12th, required only the touch of President Coolidge on a telegraph key at Washington to draw aside two American flags at the entrances of the twin tubes of the tunnel and open the greatest underway boulevard in the world to the official christening party of the States' governors, 130 mayors and 15,000 guests.

Two tubes, each with a road width of 20 feet, have a capacity for 3,800 cars hourly.

The tunnels are paved with granite block, brilliantly illuminated, and supplied with a complete change of air 42 times per hour by 84 ventilating fans.

Five thousand cubic yards of earth and rock were removed from beneath the river bed to make room for 115,000 tons of cast iron and 130,000 cubic yards of concrete with which the frame of the huge tunnel is built.

The tunnel, conceived by Clifford M. Holland, an engineer, and named for him, connects the lower end of Manhattan Island with Jersey City. Tunnels for trains have been in operation under the Hudson for years, but vehicles have had to use ferries.

Only one of the three engineers in charge of construction of the Holland tunnel lives to see the work completed. He is Ole Singstad, present chief engineer. Holland died three years ago of strain and overwork in connection with the job. His was one of the 15 deaths during the construction.

A toll of 50 cents will be charged for passenger automobiles containing not more than seven persons. Tolls for motor trucks range from \$1 to \$2. Authorities expect the tunnel will pay for itself inside of ten years. Annual gross revenue is estimated at \$9,000,000. —Michigan Roads and Pavements.



Road 5. Between Inverness and Floral City, Citrus County

BAD TOWN PAVEMENTS ON MAIN HIGHWAY ROUTES

The miserable condition of many city and village streets connecting with excellent county or State roads still furnishes ground for serious complaint by highway users. Many such cases, it is true, have been corrected, but those remaining are serious enough to warrant continued effort toward their eradication.

Some such cases are due primarily to niggardliness—to a direct effort on the part of property owners or communities to dodge a fair public burden—and should be treated with whatever form of pressure is most likely to produce results. More, however, are due to a genuine inability to finance the work, and for this reason should be given proper assistance. It is inevitable that many small towns and villages on main highways should be unable to meet the heavy costs of paving these roads throughout their limits; and yet, insofar as the roads are in bad shape, the purpose of good highways is defeated. A mile or so of ruts and chuck holes is as much a hindrance to traffic within municipal limits as without; and a simple fact of legal boundary lines should not be permitted to handicap a whole important improvement.

Few towns, we believe, will be unwilling to do what they are able toward paving main highways through them. The merchant knows that he is less likely to get business from a party swearing at his street than from one enjoying his ride; and there are further the universal elements of personal and community pride.

Not only are there to be considered the cases in which the local community is actually unable to bear the full cost of the improvement; but there are cases where abutting or local property, though able to stand the assessments, is not the primary beneficiary of the improvement. These also deserve assistance from the main highway fund. An equitable apportionment in such a case is unquestionably a difficult matter, but with the admitted injustice of placing the whole bur-

den on the local property there remains no excuse for the refusal of all sharing of expense.

Some States have laws providing for their participation in the cost of paving main highways through municipal corporations. Other States should make haste to get good laws to the same end.—Roads and Streets.

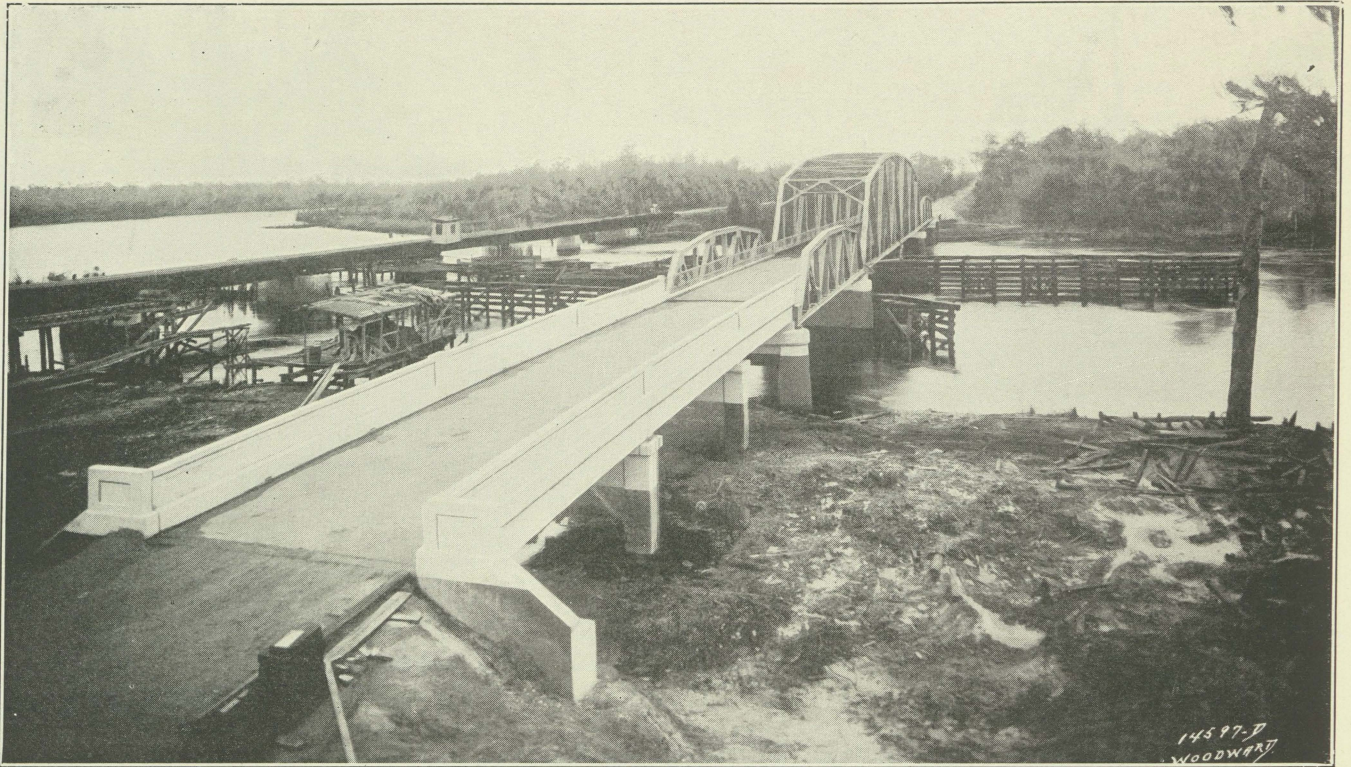
ROADS RULE THE WORLD

It has been truly said "that roads rule the world." Not kings nor congresses, nor courts nor constables, nor ships nor soldiers, but highways. They are of supreme importance to the State and to the Nation—to all nations throughout the world.

The better the highway, the more satisfied the people who enjoy the privileges of improved roads. The more satisfied the citizens, the better the conditions, generally. The road is the only royal line in a democracy, the only legislature that never changes, the only court that never sleeps, the only army that never quits, the first aid to the redemption of any nation, the exodus from stagnation in any society, the call from savagery in any tribe, the high priest of prosperity.

The road is umpire in every war and when the new map is made, it simply pushes on its great campaign of help, hope, brotherhood, efficiency and peace. No other agency plays such an important part in the development of a community and more favorably advertises it to other sections of the country than improved highways.

Improved highways make for progress and development in all avenues of activity; they promote happiness, bring prosperity and enlarge the horizon of all who live along or in close proximity to improved thoroughfares. We, of Louisiana, from actual experience covering a period of years, know the true value of improved roads and are constantly working for more and better highways.—Louisiana Highways.



Road 3. Project 421. St. Mary's River Bridge



Road 4, Volusia County.

WHO OWNS THE RIVER?

By Douglas Malloch, in *American Lumberman*.

The river belongs to the nation,
The levee, they say, to the state;
The government runs navigation,
The commonwealth, though, pays the freight.
Now here is the problem that's heavy—
Please, which is the right or the wrong?
When the water runs over the levee,
To whom does the river belong?

It's the government's river in summer
When the state of the water is low,
But in spring when its gets on a hummer
And starts o'er the levee to flow;
When the river gets suddenly dippy
The state must dig down in its till
And push back the old Mississippi
Away from the farm and the mill.

I know very little of lawing,
I've made little study of courts,
I've done little geeing and hawing
Through verdicts, opinions, reports;
Why need there be anything more said
When the river starts levees to climb?
If the government owns the aforesaid
It must own it all of the time.

If the bull you are leading should bellow
And jump over somebody's fence,
There isn't much doubt you're the fellow
Expected to bear the expense:
If it follows a Sunday School teacher
And chases the maid up a tree,
You're the owner the same of the creature
Undoubtedly all will agree.

If some time should somebody's chickens
Get into your garden and dig
And pull up the plants like the dickens,
Or somebody's bull pup or pig,
The owner thereof cannot blame it
On you or some party remote;
The owner thereof can't disclaim it
The chick or the pup or the shoat.

If it's your Mississippi in dry time
It's yours, Uncle Sam, when it's wet;
If it's your Mississippi in fly time,
In flood time it's your river yet.
There's no other way you can make it,
And so, when I give the alarm,
Come get your darned river and take it
Away from my timber and farm!

—From *Alabama Highways*.

THE CAP MAY FIT YOU

By Roe Fulkerson, in *The Kiwanis Magazine*.

I sat at the window doing what Mr. Wells designates as "meanwhiling." A decent morning's work was behind me. I felt I ought to do more but meanwhile I threw my mind into neutral and just idled.

From that invisible shore from which an idea drifts into the mind came the memory of the place

which for two thousand years outside the walls of Jerusalem has been used for just one purpose, the Wailing Place of the Jews. For all those years people have gone there to do their wailing. Those who go to the great beyond know that the relatives left behind will mourn their departure at this historic spot.

So thoroughly is the Wailing Place established that professional wailers, for a consideration, will go there and wail for you, if you have a golf game or a fishing party on when you should be wailing.

Don't smile at the absurdity! I did, until I thought twice. Second thoughts are always the best; mine taught me that as usual, the Jews were right. The wailing place is a good idea. I can prove it!

Yesterday at Kiwanis I sat with four men. The staunch advocate of prohibition sighed over the fact that the law had never had a chance because men who obeyed other laws made a joke out of this one. Another Kiwanian thought that young people growing up to manhood and womanhood since the war had no respect for any law of God, family, or man. He wailed about this condition for quite a while.

By the time he finished, another man wept rhetorical tears over the poor unfortunate farmer until stopped by the fourth man who mourned for the useless extravagance of people who spent all their money for automobiles, radios and moving pictures, sending the world to the demnition bowwows!

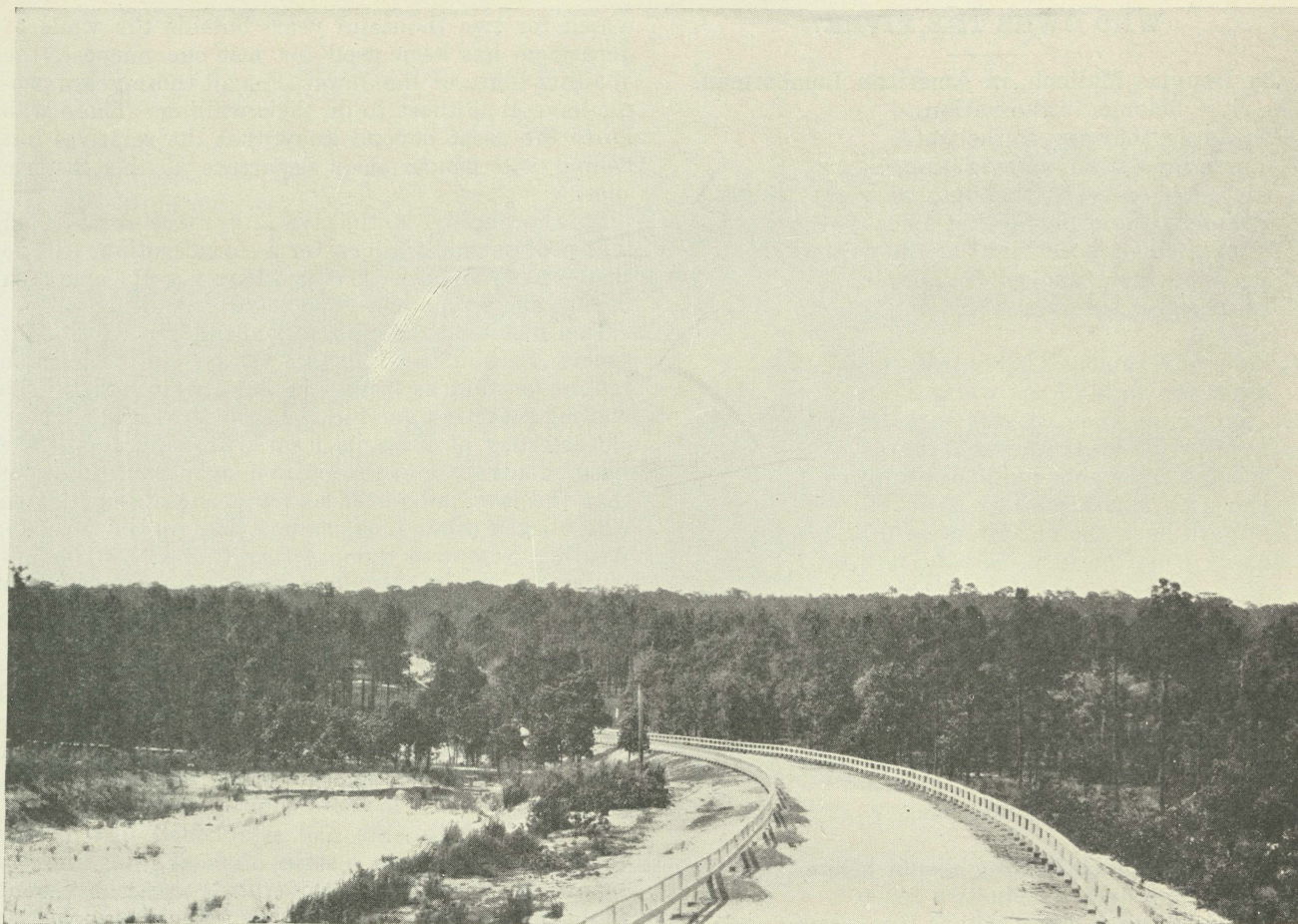
If my Kiwanis club had established just outside the dining room door, a series of small stalls like pay telephone booths where these birds could have gone to do their wailing, that luncheon would have been a lot more enjoyable to me. All of them were men of means, who could easily afford a professional wailer to go to the Wailing Place and do their wailing for them, while they had a good time at the luncheon.

Some homes could well afford a Wailing Place behind the garage. When the husband comes home at night the wife begins her sob story of all the troubles she has had with the servants and the children. Husband is inspired to match her woes with the difficulties he had in the store, office or shop. If they had a Wailing Place they could set aside fifteen minutes before dinner, and go there and butt their heads against the wall, wail like banshees, and get it over with! Or they might give the cook an extra half-dollar after she had served dinner so she could go out and wail while they ate.

I admire the idea of Wailing Places outside the dining room door at Kiwanis meetings. I have heard a lot of speakers who should have been sent to the Wailing Place after they had talked five minutes. They wailed about something which to them was mighty sorrowful but which no one else seemed to care about. They were men who saw all the flies in the ointment. They viewed life with alarm. If I could have sent them to finish their wails in a Wailing Place, it would have made my luncheon a lot more enjoyable.

It might be a good idea for every city to establish a Wailing Place in the suburbs;—the city dump would be an appropriate place—and then pass a law that whenever one heard a citizen wail, he could call a cop who would send the wailer to the Wailing Place and make him wail there.

My wife invited a spinster to dinner and for the evening. She turned our house into a Wailing Place.



Road 5. Project 545. Hernando County.

She had a sweetie who was killed in the Spanish-American War. She has been faithful to his memory and has wailed about his untimely end ever since. My wife said it was easier to be faithful to an ideal than to marry it and be faithful to a tobacco-smelling, ashes-carrying, lodge-attending reality. But that didn't stop the wailing! That woman ought to have spent her life at a Wailing Place!

No man wails unless he wants sympathy. He never gets it, because the man to whom he wails feels that he is a lot worse off, so he tries to match the other man and make him feel that his troubles are child's play, compared to his own. All such wailing matches should be relegated to the Wailing Place. The wailers could wail for a prize megaphone or a package of cough drops to aid them in their wailing!

What is sympathy? When a man sympathizes with you, he is sorry for you. When he is sorry for you he pities you. When he pities you he does so because he feels that you are a pitiable object. Who wants to be considered a pitiable object? If I knew any guy who thought I was a pitiable object I would smash him on the nose if he beat me up the next minute! Then I would have something to wail about.

Men wail about business and bankers and friends begin to check up on 'em for fear they are going on the rocks.

Men wail about their domestic affairs and preachers and moralists wonder if they are not leading a double life. Men wail about their hard luck and the world wonders what is the matter with them that they never succeed and no longer trust them with their business.

How much better off these wailers would be if they

would establish a private Wailing Place in which to do their wailing so they would not break down other people's confidence in them.

I'm a lot like you. I do some wailing, too! I am fool enough to wail because I do not get what I fatuously believe to be my just deserts. Chances are, if both of us had 'em, our wives, business associates and friends would all desert us. But come on, you big baby, let's go outside to the Wailing Place and do our squawk! Nobody is interested in it, anyway.

We have the right to squawk, but not the right to squawk publicly. It's the Golden Rule again, of course.

STATE AND FEDERAL COURT DECISIONS

(Continued from page 6)

Montreal Street Ry. Co. (10 C.S. 162), the superior right of the street railway because of its connection with public travel was clearly expressed by the Court.

The Tennessee Supreme Court says where the interference occurs off the highway the railway company has no superior right.

While this discussion, as I have said before, might be extended, I wish to apologize for the time I have already consumed. In conclusion I wish to acknowledge my indebtedness to the following gentlemen who have furnished material which has made it possible for me to prepare this paper: Mr. Boykin, Chief of the Legal Division, Bureau Public Roads, Washington, D. C.; Mr. Lozier, Attorney, Missouri State Highway Department; Mr. Shook, Assistant Attorney; Mr. Mather, Assistant Attorney, and Mr. Wm. A. Grimes, of Baltimore, senior in the Harvard Law School.—American Highways.

"Suggested Changes in Bonding and Contracting Practices on Highway Construction"

By Warren R. Neel, State Highway Engineer of Georgia

BONDING and contracting practices on highway work have long been a subject of controversy, but all agencies concerned in the question seem finally to agree at least upon one important point, that over expansion of contracts, both large and small is one of the most injurious sources of trouble in the building of roads. Highway departments say that over expansion has annoyed them through defaulted contracts. Surety companies declare it has caused them staggering losses. Contractors admit that it has ruined hundreds of construction companies, both young and old, that might have developed or maintained themselves as responsible concerns. Having recognized this condition of affairs surety companies, engineers, contractors, and others concerned, have spent several years in trying to pin the responsibility for over expansion or in trying to correct the existing methods.

Engineers have scored the surety companies for bonding irresponsible bidders. Surety companies have charged the contractors of rebating with agents and giving false information to secure a bond. Contractors have censured equipment and material dealers for selling promiscuously, relying on the bond for security. Surety companies are now passing the responsibility back to highway departments, declaring that corporate bonds were never supposed to represent responsibility in the person bonded. Even the banker has aggravated rather than helped the situation. Apparently all of these conceptions are based on some degree of fact, with the result that the construction industry is undermined with false credit.

Loose credit at one time may have been of some value in construction—when competition for public projects was purely local, and when bidding pools could be formed by local contractors—but in the present day of interstate and country-wide competition between contractors, it has become a nuisance. Where the public official once may have felt a need for encouraging the development of new companies, in order to control prices, he now commonly finds it difficult with prices below his own estimate, to place his projects with responsible contractors. A number of highway departments, in the last few years, have issued warnings to bidders to study their projects more carefully and not to bid below cost.

At the present time, automatic credit, created primarily by the surety bond, makes it possible for almost any individual without bona fide credit, experience or organization, to bid upon important projects. Having obtained a bond he can buy equipment, practically on a rental basis, and can buy materials on very easy terms. The equipment can then be used as security for the banker, who in all his wisdom rarely knows a contractor's true condition. Through such a process as this, the large contractor becomes a giant overnight; the little ones grow big in a few hours and a large number of new ones, destined to certain failure, arrive with each spring letting.

Many of these individuals have nothing to lose either in capital or reputation. By bidding extremely low they can secure a contract, collect a few estimates, and by neglecting to pay their bills obtain additional contracts with the funds obtained, and by continuing

this practice keep ahead for several years when in reality the firm is insolvent. This often keeps responsible contractors from receiving the job, as usually the dishonest contractor bids below cost. Even companies that are thoroughly responsible for a reasonable mileage of highway, expand too rapidly and meet disaster. These disasters may cost the State or its individual citizens, exclusive of losses to the sureties, many times the difference between the bid of the concern that got the job and that of a concern who could have performed it. We all know these things, yet somehow concerns of known irresponsibility continue to receive contracts which they can not perform.

For many years there has been a prevailing tendency among the awarding officials in all branches of government, to assume that anyone supplied with a surety bond was a responsible bidder. Such an assumption was never really justified, but at the present time it is wholly without foundation. The sureties themselves have told us that the corporate bond was never supposed to represent responsibility, but merely that the work would by some means be completed. This is quite a different conception of the bond from that held by legislators, commissioners and the public. It would doubtless be to the interest of everyone concerned if they were given correct information. Three points in particular should be emphasized; first, that a bidder's ability to furnish a corporate bond is no assurance that he is responsible; second, that the bond does not protect the State against all of the losses incurred by a default; and third, that for the type of protection given, the premium cost is unduly high. Probably half the present rate would be reasonable for the type of a guarantee provided.

In this connection I believe that all surety bonds should carry a clause placing the entire expense, including legal service, of collection under bond in case of default on the surety company and such an expense should be a part of the penalty of the bond. This is the practice in the South Carolina Highway Department at the present time.

The opinion of a well-known surety company, handling bonds for contractors in Georgia, relative to the high rate on contract bonds is as follows:

"In the first place the General Contractors' Association and the various State highway departments have been trying to take the view recently that the rate on contract bonds is too high. I am going to cite a few reasons why the rate is what it is today. It, of course, is interesting to note that the rate on contract bonds has not increased in many years, but as the agitation for a decrease in rate comes forward, the various State departments keep adding to the coverage right along; writing in, first the payment of labor and material bills, and even in some States including supplies furnished on the job, and a few States even go so far as to include the equipment and rental of the equipment, and it is very easy to see that as they increase the liability under the bond, they can not expect to decrease the rate.

"We do feel that the solution to the problem is the closer co-operation of the various highway depart-

ments, the sureties and the contractors, and a more thorough understanding of the true relationship. The relationship of a surety to the contractor is that of a co-partner—in fact, he is a co-partner in every sense of the word excepting the sharing of the profits, and he does share in the losses, if his co-partner is not solvent. If this relationship is to exist as it does, we need a more thorough understanding with our obligee, to which we are a guarantor, and that we be advised of any unforeseen difficulties that might arise and that often do arise, and in that way it would let us co-operate with the co-partner to the end that the obligee would be better served, the surety would be better protected and we would be making a step in the direction of a more complete understanding.

"A great many of the people that are always trying to find fault with any business, whether it is banking or suretyship or the races, feel that there are evils in the particular kind of business up for discussion that should be corrected, and usually there is some merit to the contention, as the state of perfection has not been reached by any business up to the present time. We all have hopes of improving, but I do feel that the showing of the surety companies for the past ten years can compare very favorably with the showing of any other business in our progress to a general stabilization of economic conditions. The chaos which once existed when personal surety was used guaranteeing performance of contracts and the fidelity of individuals, etc., often worked a greater hardship on the individual and the community which was more detrimental to economic construction than if the State or municipality had been compelled to have suffered the loss. In other words, it was not fundamentally sound. Surety companies started to occupy this place of a financial stabilizer, just as the Government tried to stabilize trade by the making of money and doing away with the old barter and exchange. It was a new field 35 years ago, and the progress has been, in my opinion, phenomenal and with a closer understanding and better cooperation between the two partners and the obligee, I feel sure that all parties and the public would, in the end, be better served."

At the joint conferences on bonding practices held in Washington and White Sulphur Springs, W. Va., highway officials, architects, contractors, surety officials and others discussed at length the conditions prevailing in the construction industry. A way to slow down the rapid birth rate of construction companies and their over expansion was suggested. Great hope for co-operative work was expected, but it hinged upon the surety companies, whose underwriting methods were under fire, and came to nothing beyond the development of bidders' questionnaires. Some surety companies still refuse to institute adequate investigations. They stand aloof and apparently hostile to any change of underwriting practices. Every effort to secure their co-operation has failed. Therefore, it looks as though the only course that the highway departments can follow is to make their own investigations and determine the responsibility of every contractor who receives a job.

Judging by the highway engineers' expressions of dissatisfaction with underwriting methods and by the steps already taken to make contractors qualify for their contracts, it is evident that important changes are taking place in contracting practices, if not in the surety field. These changes, which are noticeable in the Federal Government, as well as in political subdivisions, represent a throwing off of inefficient

habits, and the adoption of methods used in the commercial world. Such changes are particularly noticeable in the highway field, where a billion-dollar program has been in progress under antiquated rules and habits of a program not a tenth that size. It has been suggested by one prominent highway official that in the case of an experienced contractor making a satisfactory showing of responsibility and working capital, that the bond might very well be waived altogether or that a personal bond guaranteed by a small cash deposit of 10 percent of the contract, with an assignment of the equipment on the job, would be preferable to some corporate surety bonds.

The desirability of these changes seem to be quite generally recognized, as are conditions in the construction industry, which have been causing an unusual number of defaults. Therefore the principal needs of the present moment seem to be the formulation of recommended practices, stimulation of interest and a little educational work among those who control the general destinies of the State.

Some doubt has existed in the awarding officials' minds as to whether they could adopt a policy of throwing out an irresponsible bidder who chanced to be low. Generally they have felt a hesitancy in taking such action. In many cases, contrary to the best interests of the State, they have found it necessary to throw out all bids and readvertise, with the road-building season fast slipping by. Commissioners have felt they could not justify to the public any award except at the lowest bid, but the taxpayer is apt to become more hostile over torn-up roads and detours than he is over the contract price. Judging by the number of States that are making contractors qualify, a decided recession from some of these conceptions is taking place.

Concerning the legality and even the propriety of awarding a job to any contractor who is not responsible, very clear decisions have been rendered by the courts. Some have gone so far as to imply that an official is derelict in his duty unless he investigates the responsibility of a bidder and refuses the award to anyone found incapable of doing the work.

The Supreme Court of Kansas, in the case of *Williams vs. City of Topeka*, said:

"We conclude that the word 'responsible' in the phrase 'lowest responsible bidder' was used by the legislature in the sense in which it had long been interpreted by the court and text writers, and must be held to imply skill, judgment and integrity necessary to the faithful performance of the contract, as well as sufficient financial resources and ability."

The Supreme Court of Illinois, in the case of *People vs. Kent*, agreed with the Kansas Court when it rendered the following decision:

"As applied to a bidder who proposes to undertake the performance of the stipulations and conditions of such a contract as this, we regard the terms as including the ability to respond by the discharge of his obligations in accordance with what may be expected, or demanded under the terms of the contract. * * *"

The Supreme Court of the State of Pennsylvania has been very explicit in laying down a definition of what is meant by a responsible bidder and in warning against accepting a surety bond in lieu thereof as evidence of responsibility. It says:

"The term 'lowest responsible bidder' does not mean the lowest bidder in dollars; nor does it mean the board may capriciously select a higher bidder regardless of responsibility or cost. What the law re-

quires is the exercise of a sound discretion by the directors. They should call to their assistance the means of information at hand to form an intelligent judgment. They should investigate the bidders to learn their financial standing, reputation, experience, resources, facilities, judgment and efficiency as builders. Giving a bond alone does not make up for responsibility; we have too many bonding companies willing to indemnify almost anything."

From these decisions it appears that an awarding official, in many of the States at least, is more or less obligated to refuse a contract to concerns which he knows will do dishonest work or fail to carry out their commitments.

Unfortunately in some localities the engineer who attempts to bar dishonest and incompetent contractors from his work is subjected to attack from various business agencies who will profit through an award to some specific contractor. Occasionally they will attempt to discredit him and undermine his position. It is not necessary to state the kind of business in which such attacks originate, but it is only fair to state that from the writer's observation they do not come from responsible contractors. We should recognize that contractors' associations, when properly organized, are exerting a beneficial influence by striving to clean house in their industry.

In fact a few of the departments have utilized the co-operation of such groups to carry through important measures. The responsible contractors of the country appear eager to co-operate with the departments in correcting abuses within their own ranks, as well as among other elements of the industry. They have expressed themselves in several localities as willing to aid and protect any engineer who is under fire for carrying out his duties.

This point is mentioned here merely to indicate that the efforts of a department to institute a procedure of qualifying to demand high standards of performance, will generally be supported rather than opposed by the better class of contractors. Where good highway associations are in operation, they can be utilized in many ways to establish a suitable system.

As nearly as one may determine from specifications, about half of the State highway departments are favorable to the policy of investigating bidders. Some of them use more or less comprehensive questionnaires which reveal under oath his qualifications for each job and which he must submit before receiving an award. Among these States which make the bidder show his experience and financial standing are New Mexico, Florida, Pennsylvania, Ohio, Kentucky, Wisconsin, Missouri, Georgia, Nebraska, Iowa, Delaware and Illinois.

The State of Kentucky particularly appears to have developed a thorough system of investigation, using therein the standard questionnaires approved by the American Association of State Highway Officials in 1926. Under its plan each bidder is required to file a sworn statement showing his financial condition, amount, condition and value of his road-building equipment and his experience record. A plan and equipment questionnaire must be filed with each and every proposal submitted. The financial and experience questionnaire must be filed with the first proposal submitted by a contractor and renewed once each six months thereafter, or more often if requested.

The Missouri Department requires that the fi-

nancial statement shall be as of a date not more than 30 days prior to receipt of bids. Iowa requires that any contractor who has not before completed a paving contract on the primary road system under direction of the State Highway Commission, must submit his qualifications at least five days before a letting. He is then advised how many miles the commission is willing to award him if he should be low.

Wisconsin has a plan somewhat like that of Iowa, but extending the basic principle much farther. Every bidder is investigated in advance of receiving proposals, and listed in accordance with the size of project that the department would award him. Continued check upon each contractor's operations is made by reports from the field and each is known to the department by the character of his performance. It would be interesting to hear from the Wisconsin officials something of the details of their system and how satisfactorily it works in actual practice.

On the surface that system seems to have a number of advantages over procedure in other States, which, in theory at least, would have a very beneficial effect upon present conditions. The department is not confronted with the necessity of throwing out the low bids of contractors that are incompetent or dishonest, because each bidder must have demonstrated his responsibility before his proposal is considered. Thus the disagreeable reaction to skipping bids would seem to be avoided. More important, however, is the tendency of the system to check over expansion of both large and small concerns and have them keep within the limits of work which can be handled successfully by their organizations.

Strange as it may seem, many sizeable construction companies do not know what amount of work represents their limitations, and consequently become irresponsible by taking on too much. We sometimes fail to recognize that the term "responsible contractor" has hardly any meaning with respect to size, except when considered in connection with a specific project and with the total volume of his work on hand. Every contractor, whether large or small, has a limit of work which he is competent to handle with his organization, capital, equipment and experience. The heaviest individual losses, so the surety officials say, come from the big concerns that have over extended. Since the contracting industry does not seem able to curb its own over expansion, the highway departments in self defense will probably have to do so.

Interest in the subject of qualifying contractors is not confined to the highway field. The same tendency is noticeable in counties, municipalities, and the Federal Government. Private consulting engineers are using the standard questionnaires approved by this association. These agencies combined have obtained from the Joint Conference on Construction Practices, which developed the questionnaires, some 15,000 sets, which in many cases were used as copy for reproduction in quantity. Evidently the idea has appealed strongly to officials in charge of all types of public construction. It begins to look as though within a few years the qualifying and rating of contractors by some suitable procedure might become a universal policy. If this should occur, it is highly important in the interest of efficiency and economy that some sort of recommended practice be developed.

Individual construction companies are bidding in

many States at the present time, and some degree of standardization is particularly desirable when departments desire to exchange information on bidders. This is particularly true with respect to financial statements. Preparation of bona fide financial statement is a rather expensive and troublesome thing, if properly done; and a correct statement made annually under oath ought to be satisfactory in any State where a bidder may be required to use it. The forms approved by this association have had the most careful study by bankers, surety officials, contractors and engineers. They have been approved and are being used by members of the Clearing House Section of the American Bankers' Association. Therefore, it is suggested that they be used by the highway departments as nearly as possible in their present form.

The standard financial statement was particularly designed to encourage intelligent bookkeeping among contractors, and if it accomplishes nothing more, it will help them to overcome the most serious fault of their industry. The public will also benefit from that. If anyone considers the form too voluminous, he can readily delete without destroying the general plan. However, it should be remembered that the average financial statement can be so deceptive as to be of little value. If a statement is to be used, it should not be of such form as to permit gross deception.

Possibly the entire procedure of investigation could be standardized and the information so kept that any State department could readily check up the responsibility of bidders from other States. It is conceivable that in the future some central agency might take over the information collected and maintain it for the general benefit of public bodies and the commercial world. Some such a plan was hopefully proposed to the surety companies at the joint conference, but the proposition was rejected.

In any event it appears that sentiment is crystallizing into a conviction that public construction should not be the training and experimenting ground for contractors, and that they must present some degree of responsibility before taking public contracts. If this is true, it means that some kind of practical procedure for qualifying must be developed.

As a step in developing something of this sort, specific suggestions on the subject are here offered for discussion with the hope that the American Association of State Highway Officials will lead the way to more satisfactory contracting procedure by enunciating recommended practice. The suggestions are as follows:

1. Bidders should be required to show their qualifications for each specific project before they are awarded a contract.

2. The standard questionnaires should be used with such deletions as the department desires to make, for gauging a contractor's character, experience, financial standing and plan of operation.

3. In using the questionnaires for qualifying after proposals are opened, the following procedure should prevail:

- (a) The experience questionnaire to be submitted by every bidder who has not already submitted it

within the year preceding the letting, and to be retained permanently by the department.

- (b) The financial statement to be submitted by every bidder who has not already submitted one within the year preceding the letting, and to be as of a date not prior to one year before the letting. The low bidder should be required to submit a financial statement as of a date not prior to 60 days before the letting. His statement should be retained indefinitely, if he is disqualified or defaults his contracts, but should be returned to him upon conclusion of the work, if he completes his contract.

- (c) The plan and equipment questionnaire should be submitted with each proposal and retained under the same condition as the financial statement.

3-A. In using the questionnaires for qualifying and rating before the proposals are opened, the following procedure should prevail:

- (a) Any bidder desiring to do State highway work must be on the department's qualified list 48 hours before the time set for opening of proposals.

- (b) Any bidder desiring to be on the qualified list shall submit the experience questionnaire and the financial statement 30 days in advance of the letting, if he has not before completed a contract for the department, and seven days in advance if he has completed a contract.

- (c) The plan and equipment questionnaire to be submitted with each proposal.

- (d) All questionnaires and statements should be retained by the department.

- (e) Each bidder should be given a rating on the qualified list indicating what amount of work he will be awarded, if low.

4. All qualifying information received from contractors should be carefully protected and made available only to those in the services of the department, whose personal duty it is to do the qualifying, and possibly to surety companies.

5. Information on defaults should be made available to all State highway departments and surety companies, and some method should be worked out where the individuals composing defaulted firms, and sometimes corporations, organized under a different name, should not be permitted to bid on new work.

It is not presumed that the suggestions here made are entirely suitable to present needs. They are made for the purpose of discussion, but with the hope that the Association will give them serious study and formulate some recommended practice.

English philosopher says the character of children is determined between the ages of two and five. We'll say it is.—Philadelphia Inquirer.

Now, to show our true American spirit, let us all join in and murder the king's English.—Chicago Daily News.

"Hard-surfaced roads stretching from border to border are welding the American people into a solid, coherent nation, abolishing provincialism and sectionalism, destroying dialects and spreading tolerance and understanding everywhere."—California Highways.

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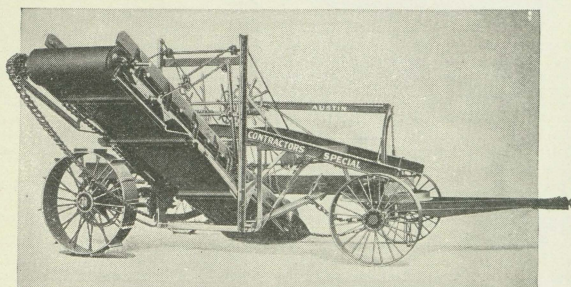
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of New York

Atlanta, Ga., Branch Office, 1320 Hurt Building.
H. N. HUTCHINSON, Manager.

A WORD FROM THE EDITOR

The natural increase in data to be compiled and the reports to be made has rendered it impossible to gather together at this end-of-the year period, the information necessary for an article on Roads 6, 7 and 8 which we had expected to feature in this number. But the series will be resumed with the February issue, and carried along then through the Federal and Primary System.

The Department expects to have an exhibit at Cleveland at the meeting of the American Road Builders' Association and Road Show, and in connection with that exhibit it is our purpose to distribute from that point copies of our January issue. For this reason, we plan to issue a pictorial edition, a sort of review in pictures of the results and accomplishments of the year 1927. We hope to have the co-operation of our advertisers in this matter by early submission of their copy, as it will be necessary for us to close our forms January 5th.



CAN YOU ASK FOR MORE? The Contractors' Special

From its all-steel stub engine hitch through its arch 24-lb. H beam side rails which rest on axles having a tensile strength of 50 tons per square inch, to the plow which raises so much dirt that only the famous Austin elevator can handle it—this elevating grader gives Service. And Austin service is not only doing more than the other fellow, but doing it better.

Write and we'll send specifications, then you compare them with any others.

**THE AUSTIN-WESTERN
ROAD-MACHINERY CO. CHICAGO**
389 WHITEHALL STREET, S. W., ATLANTA, GA.

Contracts Awarded by State Road Department January 1st, 1927, to December 15th, 1927

Contractor—	Project No.	County—	Length Miles	Length Feet	Contract + 10 %	Type
Noonan-Lawrence	54	Leon	13.00		385,288.87	Concrete.
Higgison Const. Co.	59	Leon-Jefferson	9.10		266,053.37	Concrete.
Duval Engr. & Contr. Co.	54-A & 58	Leon-Jefferson	12.53		264,524.48	R. B. S. T.
Manley Construction Co.	53-A	Lake	7.10		249,034.28	Asph. Conc.
W. J. Bryson Paving Co.	52	Escambia	10.089		241,904.49	C. G. & G.
Boone & Wester	677-C	Levy	10.16		224,345.97	C. G. & G.
Thompson & Moseley, Inc.	677-D	Levy	7.58		67,337.34	C. G. & G.
Lake Worth Const. Co.	683-C	Palm Beach	8.27		44,290.95	C. G. & G.
B. Booth & Co.	687-B	Lake	15.22		89,496.93	C. G. & G.
C. T. Dawkins	50-A	Putnam		120	22,243.32	Conc. Overh'd.
Okeechobee Const. Co.	655-667	Highlands		815	50,006.55	Timber.
C. H. Turner Co.	697	Escambia		488	22,911.53	Timber.
Duval Engr. & Contr. Co.	571	Madison	14.26		47,190.03	S. T.
Langston Const. Co.	660	Clay	10.52		33,538.07	S. T.
H. E. Wolfe	48	St. Johns	15.39		370,252.82	R. B.
Nelson Brothers	694	Martin	8.48		275,185.30	Concrete.
Johnson, Drake & Piper	693	St. Lucie	8.93		312,662.92	Concrete.
Concrete Steel Bridge Co.	665	Clay		1400	208,167.96	Concrete.
Concrete Steel Bridge Co.	664	Clay		1600	236,866.90	Concrete.
Royce Kershaw, Inc.	640-B	Martin		131	32,201.40	Concrete.
F. M. Stuart & Co.	40-B	Brevard		108	40,149.91	Concrete.
Langston Const. Co.	641	Palm Beach	9.67		188,279.21	R. B.
Samuel Vadner	695	Lake	10.50		63,734.69	C. G. & G.
Tampa Sand & Shell Co.	695	Lake			63,368.28	Hyd. Fil.
R. C. Huffman Const. Co.	669-D	Dade	12.30		382,038.36	C. G. & G.
Dean, Yarborough & Ebersbach	685	Franklin	17.43		159,980.86	C. G. & G.
Wm. P. McDonald Const. Co.	648	Hardee	7.14		24,075.97	S. T.
L. M. Gray	676-A-B	Levy	24.35		80,637.57	S. T.
West Construction Co.	614	Sarasota	17.34		483,586.35	Bit. Conc.
Manley Construction Co.	687-A	Lake	15.00		436,551.76	Sheet Asph.
M. C. Winterburn, Inc.	543	Seminole	14.20		405,596.30	Bit. Mac.
Wm. P. McDonald Const. Co.	648	Hardee	6.36		123,804.83	R. B. S. T.
Duval Engr. & Contr. Co.	659	Clay	2.80		49,310.97	R. B. S. T.
C. A. Steed & Sons Co.	668	Brevard	13.45		273,640.32	R. B. S. T.
Stidham & Hughes	564-C	Charlotte	3.93		81,173.55	R. B. S. T.
H. L. Clark & Sons Co., Inc.	676-C	Levy	15.01		227,110.22	R. B. S. T.
F. X. Bradley & Co.	573-D	Orange	16.81		95,642.25	C. G. & G.
C. A. Henderson	713	Columbia	10.00		85,284.71	C. G. & G.
James Betteridge	41-B	Dade		88	42,387.84	Concrete.
Peterson & Earnhart	698	Leon		400	34,773.06	Concrete.
Peterson & Earnhart	699	Jefferson		300	27,441.17	Concrete.
John J. Quinn, Inc.	641	Palm Beach	1.00		52,494.31	S. T.
Board Co. Commrs., Taylor Co.	745	Taylor	14.00		12,320.00	C. & G.
Finlayson & Morris	747	Jefferson	6.50		40,566.79	C. G. & G.
C. S. Maulsby	694	Martin			10,780.00	Protection.
Kibby Engineering Co.	663-679	Citrus-Hernando	15.00		19,145.28	Guard Rail.
Alexander, Ramsey & Kerr, Inc.	669	Dade	4.27		205,700.00	C. & G.
Langston Constr. Co.	522	Nassau	4.06		43,394.76	R. B. S. T.
W. J. Bryson Paving Co.	593	Manatee	0.66		12,058.22	Bit. Conc.
E. W. Parker	589	Lee		313	43,942.63	Concrete.
Murphy & Pryor	691	Indian River		285	60,594.05	Conc. Overhead.
Hayes & Kroeger	687-A	Lake		120	18,264.37	Conc. Overhead.
E. W. Parker	614	Sarasota P		165	50,330.50	Conc. Bridge.
E. W. Parker	614	Sarasota V		150	71,320.42	Conc. Bridge.
E. W. Parker	614	Sarasota S		130	53,530.89	Conc. Bridge.
E. W. Parker	614	Sarasota H		130	68,210.17	Conc. Bridge.
Cone Bros. Const. Co.	49	Flagler	13.81		252,196.06	R. B. S. T.
Fowler & Banko, Inc.	691	Indian River	5.52		165,364.35	Concrete.
Fowler & Banko, Inc.	692	St. Lucie	7.38		229,002.48	Concrete.
General Const. Co.	41-B	Dade		132	40,529.06	Conc. Bridge.
F. X. Bradley & Co.	716	Bradford	11.12		57,024.85	C. G. & G.
F. X. Bradley & Co.	717	Bradford	10.93		85,834.62	C. G. & G.
L. M. Gray	50-B	Putnam	9.77		158,822.09	R. B. S. T.
N. C. Cash	50-C	Putnam	10.03		178,026.92	R. B. S. T.
C. R. Scott	619	Alachua	9.28		134,370.72	R. B. S. T.
Higgison Const. Co.	6	Madison	5.45		47,471.46	C. G. & G.
W. J. Bryson Paving Co.	55	Alachua	16.77		142,280.00	C. G. & G.
Harrison & Estes	697	Escambia	.14		9,013.01	C. G. & G.
Franklin Const. Co.	706-A	Putnam	12.09		83,567.57	C. G. & G.
W. J. Bryson Paving Co.	714	Union	10.20		67,006.89	C. G. & G.
Sellers Const. Co.	715	Union	3.20		20,752.62	C. G. & G.
Little & Lee, Contractors	742	Alachua	7.65		39,762.96	C. G. & G.
Johnson, Drake & Piper	680	Bay		4000	829,392.71	Conc. & Steel.
Johnson, Drake & Piper	681	Bay		7530	1,119,966.46	Conc. & Steel.
F. W. Simpson	764	Suwannee	12.00		55,731.19	C. G. & G.
F. W. Simpson	765	Suwannee	7.00		30,428.89	C. G. & G.
Duval Engr. & Contr. Co.	677-A	Levy	6.96		88,648.38	R. B. S. T.
W. J. Bryson Paving Co.	53-B	Lake		671	96,431.98	Conc. Bridge.
C. G. Kershaw Contr. Co.	719	Suwannee	8.57		40,355.35	C. G. & G.
American Bascule Bridge Corp.	53-B	Lake			16,471.40	Bascule.
Nashville Bridge Co.	685-B	Franklin		120	16,183.75	Steel Span.
N. B. Burton	677-D	Levy	3.05		15,827.95	C. G. & G.
Carl Fay	668	Brevard	1.00		7,326.00	C. G. & G.
Peterson & Earnhart	698-B	Leon		110	4,689.08	Timber Overhead.
Barnes Construction Co.	518	Lafayette	17.75		122,259.23	C. G. & G.
L. B. McLeod Const. Co.	535	Lafayette	13.19		68,103.35	C. G. & G.
L. B. McLeod Const. Co.	624	Hamilton	6.23		36,848.61	C. G. & G.
Curry & Turner	706-B	Putnam	14.91		68,419.63	C. G. & G.
Hardee Fisher Co., Inc.	708	Jefferson	7.98		64,781.26	C. G. & G.
Hardee-Fisher Co., Inc.	720	Jefferson	9.64		62,038.84	C. G. & G.
R. J. Carroll	722	Jefferson	8.83		67,379.51	C. G. & G.
L. B. McLeod Const. Co.	723	Leon	11.76		91,031.05	C. G. & G.
A. E. Campbell	763	Suwannee	12.23		35,291.76	C. G. & G.
Peterson & Earnhart	6-B	Madison		297	58,579.56	Conc. Bridge.
Peterson & Earnhart	700-B	Jefferson		496	64,333.54	Conc. Bridge.
N. S. Golden	669XZ	Collier		600	8,801.65	Timber Bridge.
W. M. Hartin	593	Manatee			7,012.50	Remove Bridge.

CONTRACTS AWARDED BY STATE ROAD DEPARTMENT—(Continued)

January 1st, 1927, to December 15th, 1927

Contractor—	Project No.	County—	Length Miles	Length Feet	Contract + 10 %	Type
L. M. Gray	50-A	Putnam	6.18	.....	\$107,716.22	R. B. S. T.
H. E. Wolfe Const. Co.	669-X-Z	Collier	15.88	.....	220,281.24	R. B. S. T.
West Construction Co.	640-A	Martin	9.00	.....	245,980.24	Sheet Asph.
West Construction Co.	640-B	Martin	11.80	.....	338,710.85	Sheet Asph.
S. P. Snyder & Son	654	Broward	6.30	.....	160,037.98	Bit. Mac.
E. F. Powers Const. Co.	615	Sarasota	11.92	.....	118,804.33	C. G. & G.
Cox & Bryson Paving Co.	573-D	Orange .....	.....	173	30,833.50	Conc. O. H.
The Albinson Co.	661-B	Lake .....	.....	40	18,408.24	Conc. O. H.
Chas. F. McKensie & Co.	695-B	Lake .....	.....	509	36,939.21	Conc. O. H.
Kidd Construction Co.	706	Putnam .....	.....	675	33,826.98	Tmbr. Bridge
Gillespie & North	717	Bradford .....	.....	110	5,139.64	Timber O. H.
Duval Engr. & Contr. Co.	659	Clay	2.53	.....	38,223.30	R. B. S. T.
American Bascule Bridge Corp.	695-B	Lake .....	.....	.....	17,585.70	Bascule
Langston Const. Co.	695	Lake .....	.43	.....	6,141.57	R. B. S. T.
H. E. Wolfe	669-W	Collier	9.00	.....	154,692.78	R. B. S. T.
Erler Corporation	585-B	Santa Rosa .....	.....	165	27,386.33	Concrete
Hathaway & Demarest	521	Nassau .....	.22	.....	4,991.80	C. G. & G.
Total			725.10	22,371	\$13,926,983.25	

"Mix Thoroughly"

A young bride asked her husband to copy a radio recipe she wanted. He did his best but got two stations at once, one of which was broadcasting physical exercises and the other the recipe. This is what he took down:

"Hands on hips, place one cup of flour on the shoulders, raise knees and depress toes, and mix thoroughly in half a cup of milk. Repeat six times. Inhale quickly one-half teaspoonful of baking powder, lower the legs and mash two hard-boiled eggs in a sieve. Exhale, breathe naturally, and sift into a bowl.

"Attention! Lie flat on the floor and roll the

white of an egg until it comes to a boil. In ten minutes remove from the fire and rub smartly with a rough towel. Breathe naturally, dress in warm flannels, and serve with fish soup."

The Verdict.

The following was the verdict by an Iowa jury in a suit against a railroad company:

"If the train had run as it should have run; if the bell had rung as it should have rung; if the whistle had blown as it should have blew, both of which it did neither—the cow would not have been injured when she was killed."—Erith Observer.

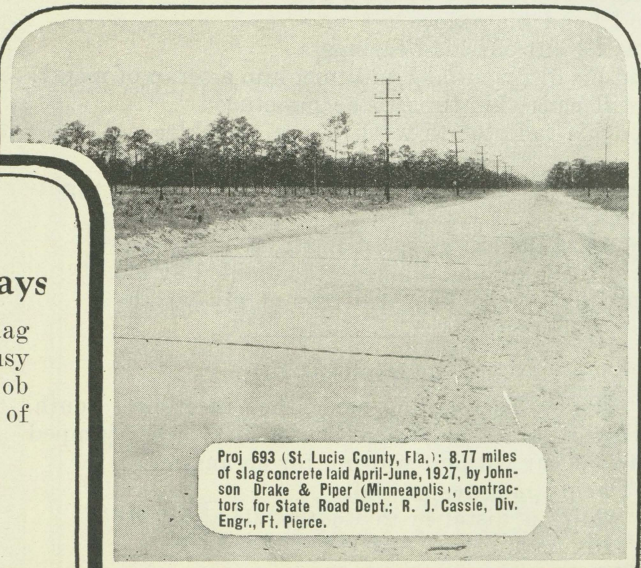
8.77 Miles of Concrete
In 42 Working Days

HERE'S a typical example of how Slag Headquarters work with the busy road builders in getting the big job done right and—on time. Nearly 9 miles of

"ENSLEY" & "ALA CITY"
BASIC SLAG
CRUSHED & SCREENED

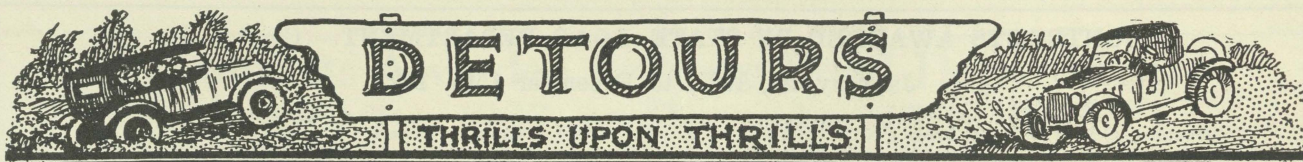
concrete highway—completed in 42 working days. Such speed is possible only when every ton of aggregate meets the standard requirements for that particular type of paving—only when shipments come through, steadily, on schedule time.

Service, like that, insures progress—increases profits. And when it is combined, as in this case, with a specially designed (1:2.35:3.76) mix the result is high test concrete of unusual solidity and strength.



Proj 693 (St. Lucie County, Fla.): 8.77 miles of slag concrete laid April-June, 1927, by Johnson Drake & Piper (Minneapolis), contractors for State Road Dept.; R. J. Cassie, Div. Engr., Ft. Pierce.

**BIRMINGHAM
SLAG COMPANY**
Slag Headquarters for the South
BIRMINGHAM
Atlanta Montgomery
Ocala Fla Thomasville
Jacksonville



The Psalm Of Detour

By Ira L. Wood

I am Detour;
Maker of cuss words,
Producer pains,
Destroyer of autos.

Even the good say DAMN when they see me
And the wicked say I am HELL.

I putteth in action the rear seat driver,
I maketh the Cadillac look like a flivver,
And a flivver like a junk pile

Woe unto the motorist that forgetteth men;
That taketh me not into consideration;
That thinketh not of me when he planneth a journey!

For, verily, when he is at the height of his pleasure,
When he sayeth unto himself,
"Verily this is the road of roads
And motoring is the king of pleasure."

Then will I decend upon him
And utterly destroy his joy in life.

Yea, verily, I will break his springs
And bend his axle;
I will burn out his bearings,
And his differential I will turn into a scrap of metal;
I will cause his tires to be punctured
And his radiator to work like a sprinkler.

Yea, verily, I will turn his whole trip into a night-
mare

For I am Detour, greatest of all joy killers.
Even the high and mighty are humbled by me
And the tourist liveth in fear of my wrath.

Laugh That Off.

"Hello, Hayseed," said the facetious youth.
"How's it for a lift to Centerville?" He jumped
into the car without waiting for an answer.

Twenty minutes passed.

"Quite a distance to Centerville, isn't it?"

"Uh, huh."

Twenty minutes more.

"Say, how far is it to Centerville?"

"Few thousand miles if you go this way; 'bout
twenty if you get off and walk back."—Selected.

Taming the Wild

"Hello, old man, where have you been?"

"Just got back from a camping trip."

"Roughing it, eh?"

"You bet. Why, one day our portable dynamo
went on the bum and we had no hot water, heat,
electric lights, ice or radio for almost two hours."—
Life.

Ragging the Classics

It was an amateur play and the manager said that
everybody in the cast was jealous of everybody else.
He declared that never again would he manage an
amateur play. When questioned about his main
difficulty, he made reply: "I'm having a deuce of
a time keeping the peace between Damon and Py-
thias."—Louisville Courier-Journal.

Picked the Wrong Sport

Convict (reading newspaper)—"Dere's justice for
yer! A football player breaks two men's jaws and
another man's leg and is de lion of de hour, while
I get ten years for only stunnin' an old guy wid
a blackjack."—Boston Transcript.

Model for Husbands

The harassed-looking man was being shown over
some works.

"That machine," said his guide. "does the work
of thirty men."

The man smiled glumly.

"At last," he said. "I have seen what my wife
should have married."—London Tit-Bits.

Cookery with a Kick

Young Wife—"I'm afraid, dear, my pie is not all
it should be. I think I must have left something
out."

Husband (with a grimace, after sampling it)—
"There's nothing you could leave out that would
make it taste like that. It must be something you
put in."—Boston Transcript.

Weakening

Customer: "You sold me a car about two weeks
ago."

Saleman: "How do you like it?"

Customer: "I want you to tell me everything
you said about the car all over again. I'm getting
discouraged."

Waking Up

Julia—"What is the cure for love at first sight?"

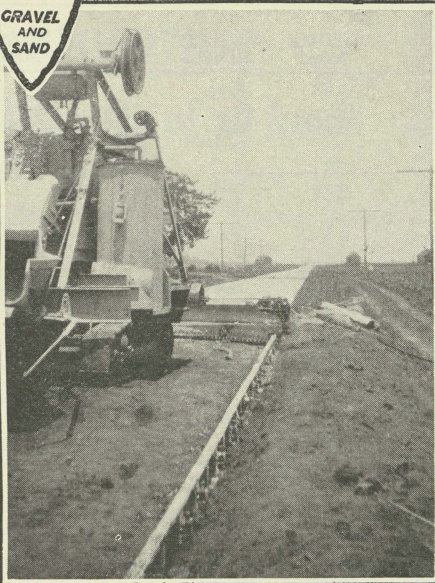
Amelia—"Second sight."—London Opinion.

After many years of study, a Vienna doctor an-
nounces that he has discovered a cure for asthma.
At last Vienna has done something to atone for
psychoanalysis.—Cleveland Plain Dealer.

Another of life's problems is how to keep dumb
people from talking.—Arkansas Gazette.

It's always easy to pick out the man with the
inimitable style. He has so many imitators.—Detroit
News.

Public speaking is the art of diluting a two-
minute idea with a two-hour vocabulary.—San
Diego Union.



One Source of Supply for all the Sand and Gravel

How many big road jobs have you completed after having to deal, finally, with two or three aggregate producers? Several! And those changes, and delays, cost money—real money. That's a big point in favor of using

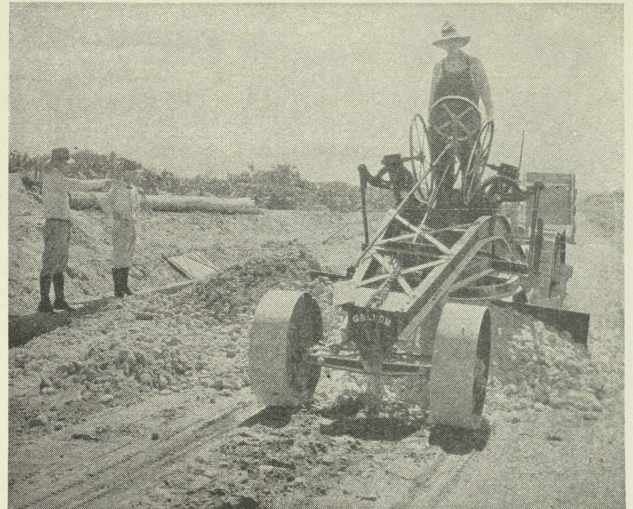
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C. W. STONE, Sales Manager

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Status of Construction

THROUGH OCTOBER 31ST, 1927.

Proj. No.	Contractor.	Road No.	County	Total Length Miles	Clearing Miles	Grading Miles	Base Miles	Surface Miles	Per Cent Type	Complete
6	Higgison Const. Co.	1	Madison	5.45	4.53	3.93		Graded	74.00	
49	Cone Bros. Const. Co.	4	Flagler	13.82			12.44	0.00 S.T.R.B.	70.00	
50-A	L. M. Gray	14	Putnam	6.18			0.00	0.00 S.T.R.B.	0.00	
50-B	L. M. Gray	14	Putnam	9.77			9.78	9.58 S.T.R.B.	99.00	
50-C	N. C. Cash	14	Putnam	10.03			8.82	0.00 S.T.R.B.	60.30	
52	W. J. Bryson Paving Co.	1	Escambia	10.09	9.17	7.47		Graded	76.00	
53-C	Tampa Sand & Shell Co.	2	Lake	1.87	1.87	1.87		Graded	100.00	
54	Noonan-Lawrence	1	Leon	13.00				13.00 Concr't	99.00	
55	W. J. Bryson Paving Co.	14	Alachua	16.77	12.58	3.52		Graded	39.00	
502	State Convict Forces	10	Gulf	6.94			6.94	6.94 S.T.R.B.	99.42	
518	Barnes Construction Co.	5-A	Lafayette	17.75	13.31	2.66		Graded	20.00	
535	L. B. McLeod Const. Co.	5-A	Lafayette	13.19	6.60	1.98		Graded	16.00	
543	M. C. Winterburn, Inc.	3	Seminole	14.20			13.49	8.80 Bit.Mac.	78.52	
614	W. J. Bryson Paving Co.	5	Sarasota	17.34	17.34	17.34		Graded	100.00	
614	West Construction Co.	5	Sarasota	17.34			16.30	11.09 Bit.Mac.	79.00	
615	E. F. Powers Const. Co.	5	Sarasota	11.92	0.00	0.00		Graded	0.00	
619	C. R. Scott	5	Alachua	9.28			9.28	9.28 S.T.R.B.	95.00	
624	L. B. McLeod Const. Co.	50	Hamilton	6.23	5.61	.59		Graded	18.00	
640-A	West Construction Co.	4	Martin	9.00			0.00	0.00 S. Asph.	0.00	
640-B	West Construction Co.	4	Martin	11.80			0.00	0.00 S. Asph.	0.00	
641	Langston Const. Co.	4	Palm Beach	11.90			11.90	11.90 S.T.R.B.	100.00	
645	State Convict Forces	10	Wakulla	18.50			10.00	5.00 S.T.R.B.	65.00	
651	State Convict Forces	10	Gulf	14.72			5.29	0.00 S.T.R.B.	32.40	
653	H. D. Spangler	4	Broward	13.46	13.19	12.11		Graded	86.70	
654	S. P. Snyder & Son	4	Broward	6.30	0.00	0.00	0.00	0.00 Bit.Mac.	0.00	
659	M. C. Winterburn, Inc.	3	Clay	13.27	13.27	13.27		Graded	99.00	
659	Duval Engr. & Contr. Co.	3	Clay	3.17			3.01	0.00 S.T.R.B.	76.00	
668	C. A. Steed & Sons Co.	4	Brevard	13.45			13.45	10.76 S.T.R.B.	89.00	
669-C	R. C. Huffman Const. Co.	27	Dade	12.00	12.00	10.80		Graded	90.00	
669-D	R. C. Huffman Const. Co.	27	Dade	12.30	9.85	5.54		Graded	50.00	
669-W	State Convict Forces	27	Collier	15.40	15.40	15.00	15.86	11.70 S.T.R.B.	90.00	
669-XZ	H. E. Wolfe Const. Co.	27	Collier	15.88	0.00	0.00	0.00	0.00 S.T.R.B.	0.00	
676-C	H. L. Clark & Sons Co., Inc.	19	Levy	15.02			15.02	11.70 S.T.R.B.	94.00	
677-A	Duval Engr. & Contr. Co.	13	Levy	6.96			6.96	4.97 S.T.R.B.	90.00	
677-C	Boone & Wester	13	Levy	10.16	10.16	7.11		Graded	85.00	
677-D	Thompson & Moseley, Inc.	13	Levy	7.58	7.58	7.58		Graded	100.00	
677-D	N. B. Burton	13	Levy	3.05	1.53	1.53		Graded	50.00	
683-C	Lake Worth Const. Co.	4	Palm Beach	9.16	9.16	9.00		Graded	97.00	
685	Deen, Yarborough & Ebersbach	10	Franklin	18.63	17.72	10.25		Graded	72.35	
687-A	Manley Const. Co.	2	Lake	15.00			15.00	13.95 S. Asph.	95.00	
687-B	B. Booth & Co.	2	Lake	15.22	15.22	15.07		Graded	99.00	
691	Fowler & Banko, Inc.	4	Indian River	5.52				5.52 Concr't	100.00	
692	Fowler & Banko, Inc.	4	St. Lucie	7.38				7.38 Concr't	100.00	
695	S. Vadner and Tampa Sand & Shell Co.	2	Lake	10.54	10.43	9.48		Graded	95.50	
698	Curtis & Gubbins	19	Leon	12.43	12.43	12.31		Graded	98.00	
700	State Convict Forces	19	Jefferson	9.26	9.26	9.26		Graded	100.00	
706-A	Franklin Const. Co.	28	Putnam	12.09	7.11	4.91		Graded	49.00	
706-B	Curry & Turner	28	Putnam	14.91	7.30	.89		Graded	13.00	
708	Hardee-Fisher Co., Inc.	11	Jefferson	7.98	5.50	1.43		Graded	21.00	
713	C. A. Henderson	28	Columbia	10.00	10.00	9.90		Graded	99.61	
714	W. J. Bryson Paving Co.	28	Union	10.20	5.00	2.04		Graded	35.89	
715	Sellers Const. Co.	28	Union	3.70	3.47	1.66		Graded	52.51	
716	F. X. Bradley & Co.	28	Bradford	11.13	9.46	6.68		Graded	73.50	
717	F. X. Bradley & Co.	28	Bradford	10.94	10.39	5.47		Graded	59.50	
719	C. G. Kershaw Contr. Co.	5-A	Suwannee	8.57	8.31	6.00		Graded	74.00	
720	Hardee-Fisher Co., Inc.	11	Jefferson	9.64	6.46	0.00		Graded	4.20	
722	R. J. Carroll	48	Jefferson	8.83	0.00	0.00		Graded	0.00	
723	L. B. McLeod Const. Co.	66	Leon	11.76	1.64	1.41		Graded	10.00	
726	State Convict Forces	19	Dixie	12.57			Not reported.	Graded		
728	State Convict Forces	10	Leon	11.65	9.32	3.96		Graded	31.20	
740	State Convict Forces	10	Gulf	9.63	9.63	8.85		Graded	54.60	
742	Little & Lee	13	Alachua	7.65	6.88	3.59		Graded	63.00	
743	State Convict Forces	10	Bay	18.25	12.59	12.59		Graded	48.60	
745	Convicts and Taylor County	19	Taylor	14.00	6.38	3.67		Graded	19.64	
747	Finlayson & Morris	35	Jefferson	6.50	5.85	5.85		Graded	73.30	
763	A. E. Campbell	50	Suwannee	12.23	7.28	2.47		Graded	28.90	
764	F. W. Simpson	50	Suwannee	12.00	9.60	5.64		Graded	54.80	
765	F. W. Simpson	50	Suwannee	7.00	5.17	2.30		Graded	41.95	
770	State Convict Forces	22	Broward	9.00			Not reported.	Graded		
786	State Convict Forces	52	Jackson	6.76	4.39	4.39		Graded	50.34	
Total complete October 31, 1927					2300.32	2191.23	1068.46	1685.21		
Complete Month of October					50.88	51.14	25.07	58.66		
Total complete September 30, 1927					2249.44	2140.09	1043.39	1626.55		

TOTAL MILEAGE COMPLETE

	Concrete	Brick	B. C.	S. A.	B. M.	Asph. Block	S.T.R.B.	S. C.	Marl	Total
Complete to September 30, 1927	238.57	17.13	29.58	90.92	97.89	23.20	774.85	399.91	27.58	1718.13
Complete Month of October	4.49		3.64	.45	2.10		28.65			39.33
Complete to October 31, 1927	243.06	17.13	33.22	91.37	99.99	23.20	803.50	399.91	27.58	1757.46

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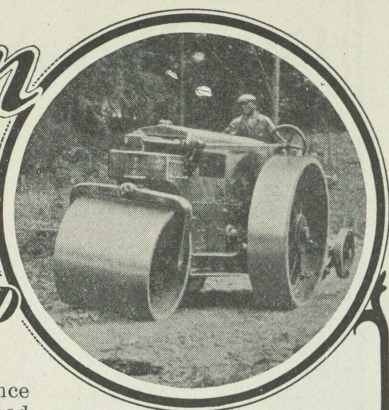
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